SD Times
SOFTWARE DEVELOPMENT
The Industry Newspaper for Software Development Managers

MAY 15, 2002
ISSUE NO. 054

Macromedia Fires MX At Internet 3

.NET Framework, Unified Process 'Jolt' SD Expo 3

Quintessence Converts PL/SQL to Java 4

CodeCharge Gets Visual Boost With Studio . .4

Perforce SCM Supports Unicode, .NET 6

Parasoft Delivers Web Services Testing Tool 6

CA Updates Portal, Revamps AllFusion 8

SlickEdit Gets Major Upgrade 8

Synthesizable ARM10 Core Set for July Release 15

Embedded Systems Conference Heads to O'Hare 16

Empress Offers Database Access Using C APIs 16

TI's Wireless Hand: Pair Of New Hardware Kits 17

Birdstep Flies Into Mirroring, SQL 17

Strategies For Enabling Apps Over Cell Phones 18

A BZ MEDIA PUBLICATION $7.95
www.sdtimes.com

WEB SERVICES ORGANIZATION GETS DOWN TO BUSINESS

WS-I working groups tackle interoperability

BY CHRISTINA M. PURPI

The Web Services Interoperability Organization, a vendor consortium also known as the WS-I, last month announced the creation of three new working groups as it takes the lead in testing and certification of Web services.

According to Joe McGonnell, product manager for Web services operation at Hewlett-Packard Co. and HP's representative on the WS-I marketing committee, the interoperability issue is one "that needs to be solved before Web services become real in the marketplace. Interoperability has to be worked out before large enterprises begin deploying large-scale Web services."

In a nutshell, the objectives of these working groups are to "tell you what you need to do, show you examples of how to do it, and provide you with the tools to make sure you're doing it correctly," said McGonnell. In addition, he expects that the "WS-I will, over time, make recommendations to various standards bodies if any interoperability issues are uncovered in the various core Web services industry standards."

Of the three groups, the Test Materials and Tools Development Working Group, has as its

▸ continued on page 10

Sun Drops JDO From Sun ONE Studio, for Now

BY EDWARD J. CORREIA

Sun Microsystems Inc. has dropped its implementation of the Java Data Objects specification from its Sun ONE Studio 4, formerly called Forte for Java 4, and has not announced concrete plans to replace it, leaving many of its developers in the lurch.

Sun informed the developers on the Forte for Java mailing list via e-mail, in late April, and when one recipient posted the message to a reader forum on the forte.sun.com site, many questions and comments flew. "I'm very surprised to see that this has been dropped without even mentioning it in the release notes," wrote Mark Shead. "What is Sun going to do with this technology? How is it going to be made available?" wrote Philip Smith. At press time, none of the many questions had received a response from Sun.

Object-relational mapping is a small part of JDO, says Sun's Russell.

The JDO specification is intended to give developers a transparent way to persist their Java objects in a database without the need to know or use that database's query language. Sun had delivered a preview reference implementation with Forte for Java 3.0 based on JSR-12, the precursor to JDO 1.0.

Craig Russell, an architect with Sun who also served as the Java Community Process' specification lead for JDO, said that dropping the implementation from Forte was logical for two reasons. "The Forte tools team is in the business of providing tools; they are not responsible for the runtime behavior of code. It's a mismatch to have the Forte division writing code that runs and does database mapping," a function that he said contains mostly runtime code. And, he added, since the implementation was made avail-

▸ continued on page 11

Feather in Apache's Cap

Group wins JCP concessions, stands as face of open-source community

FIRST OF A TWO-PART SERIES

BY DAVID RUBINSTEIN

With major concessions won at this year's JavaOne conference from both Sun Microsystems Inc. and the Java Community Process, and implementations of its work appearing in the products of major software vendors, the Apache Software Foundation has taken a leading role in fighting for the openness of code.

Much of the group's influence derives from its position within the JCP; as the only open-source organization seated on the executive committee, Apache is uniquely placed to speak for the needs of the open-source community as it relates to Java development. But Java isn't the only arena in which Apache has made significant inroads; the group claims its Web server is 40 percent faster on Windows than Microsoft's own IIS, and its Axis SOAP server was recently implemented by Macromedia in its MX application development tool suite.

There are some, however, who believe the efforts of the Apache group fall short of what could be accomplished for the open-source community, and question whether the group is or should be the symbol of their cause. No one, though, can question that the organization's position as open-source advocate has risen in the wake of the victory at JavaOne.

"The reason companies are sitting up and listening is that [Apache] is the world's most popular and proven Web server," said Robin Miller, editor-in-chief of the Linux.com and NewsForge.com Web sites, who is known as "Roblimo" within the Slashdot cabal. "It is the single most popular open-source effort."

Tim O'Reilly, of O'Reilly &

▸ continued on page 12

SUN'S COO ED ZANDER STEPPING DOWN

In the latest of what has become a series of executive changes, Sun Microsystems Inc. will lose COO Ed Zander on July 1, when the head of day-to-day business operations will retire.

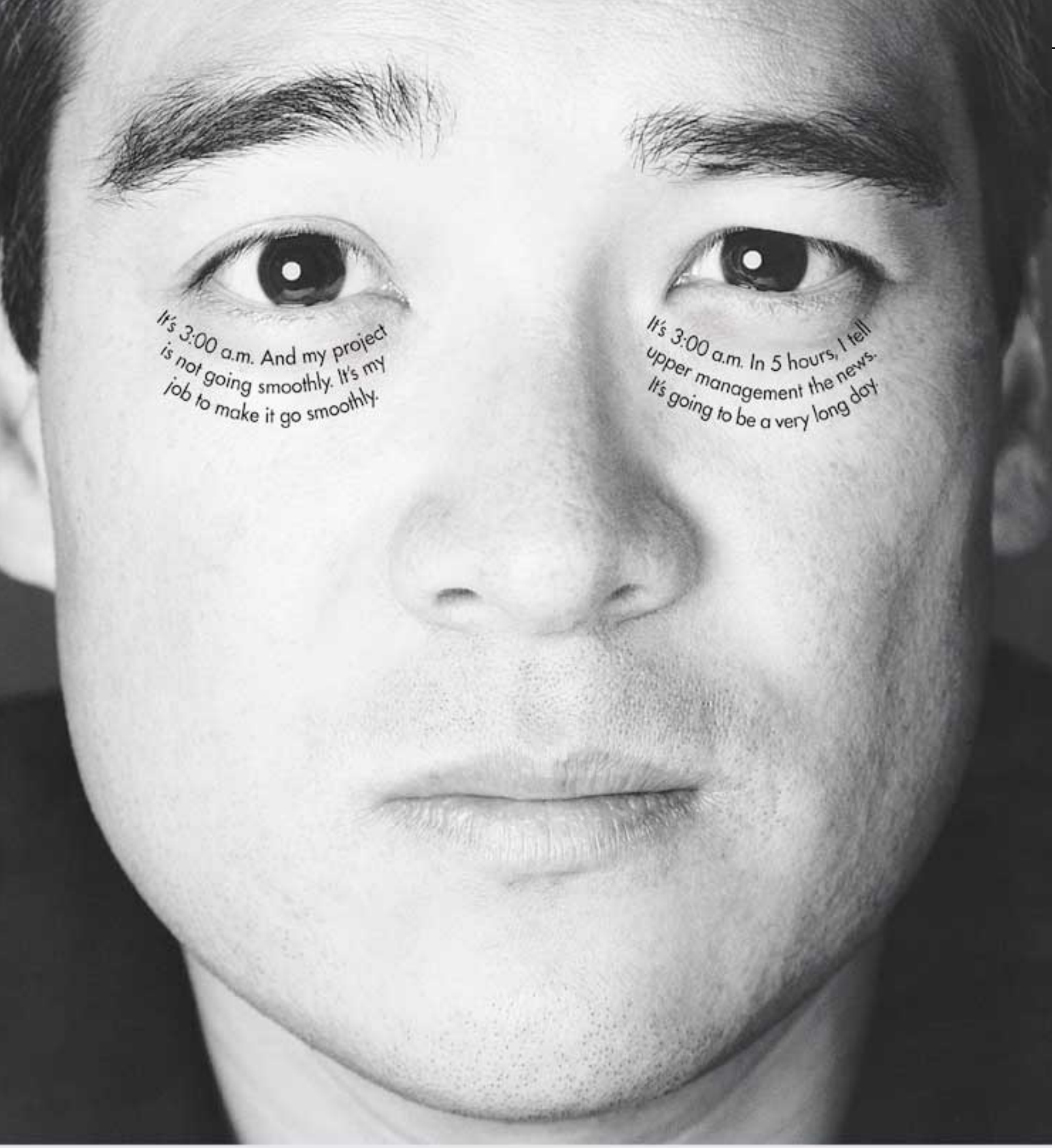
Zander will retire on July 1.

Zander, who next to CEO Scott McNealy was the highest-profile officer at the embattled hardware and software company, said he has been considering the move for about a year but wanted to help the company get through what he termed "a difficult year." He has been with the company for 15 years and declared, "I think Sun is in the best shape it's been in in years." Investors apparently didn't share the view, reacting to the news by driving down Sun's stock price more than 15 percent on May 1, the date of the announcement.

McNealy said in a call to analysts, "What can I say but thanks to just an awesome effort by Eddie over all these years."

Zander joins Larry Hambly, executive vice president of enterprise services; Mike Lehman, CFO; and John Shoemaker, executive vice president of computer systems, as company officers who have recently announced they are leaving.

–David Rubinstein



You're responsible for the success of your company's critical business applications. Without the security of stable software products and world-class support, your future may be full of sleepless nights. Next time, choose Rogue Wave® SourcePro™ C++ and get trusted, field-proven components coupled with expert support and services. You'll be secure in the knowledge that your development projects will be delivered on time, on scope and on budget. To find out more about SourcePro C++, visit **www.roguewave.com/sleepless.**

ROGUE WAVE SOFTWARE

Macromedia Fires MX at Internet

Development, deployment tools aim to enrich user experience

BY DAVID RUBINSTEIN

Please stand by. Macromedia Inc. says that it's upgrading the Internet experience.

Taking what it calls a holistic view of client, server and back-end relationships, and leveraging the millions of installations of its Flash MX media player client software, Macromedia late last month announced the final pieces of its new MX product strategy for creating and delivering a new generation of rich Internet applications.

Completing the vision kicked off with the release of its Flash MX player and authoring tool upgrade, which the company claims was downloaded 100 million times in the first six weeks of availability, Macromedia (www.macromedia.com) announced a revamped ColdFusion MX server and the new Macromedia Studio MX toolkit.

"This is the most significant product family release in the company's [10-year] history," said Jeremy Allaire, Macromedia's CTO. "The Web of today is about browsing. The Internet of tomorrow is about doing."

Flash Remoting service allows for delivery of remote components to Flash clients.

The Web, Allaire claimed, has "hit a wall," failing as an interactive application environment and serving only as a limited media and communications platform. "The whole model of next-generation applications is rich clients and a service-oriented architecture," Allaire said. "We've brought together the left brain and right brain, client and server, code and content."

ColdFusion MX, previously code-named Neo, is the latest version of the company's Web server, which Allaire said has been rebuilt from the ground up on top of the J2EE platform, allowing scripting-level developers to rapidly construct server-side applications that compile into Java and deploy into any J2EE environment. ColdFusion MX can be deployed as a stand-alone server or on top of Java application servers, he said, and has ActionScript server-side scripting support.

The ColdFusion MX application server is bundled with Macromedia's JRun 4 application server, but Allaire said applications can be deployed onto any J2EE-compliant server, and he announced partnerships with Sun Microsystems Inc. and IBM Corp. that will bring ColdFusion MX to the Sun ONE and WebSphere platforms, respectively, and will tie the Dreamweaver MX development tool to the WebSphere Studio development platform through the Eclipse open-source framework.

Developers can create reusable code with ColdFusion Components capability built into MX, which also comes with the first commercial implementation of the Apache Axis Web services engine. A new Flash Remoting service allows developers to invoke and use components running in any application server or a SOAP Web service, and to deliver them to Flash clients, he explained.

ColdFusion MX servers are expected to ship in June under two products lines—one for .NET and one for Java. The ColdFusion MX for J2EE Application Servers product line sells for $3,399 per processor; ColdFusion MX Enterprise Edition for .NET is $4,999 per server. Flash Remoting sells for $799 per server.

Macromedia Studio MX includes the widely used Dreamweaver MX Web development tool and the Flash MX authoring tool, as well as a Fireworks MX graphics tool—"[Adobe] Photoshop on steroids," Allaire claimed—and a developer edition of ColdFusion MX. "We've created a full coding environment, with debugging and drag-and-drop components," Allaire said. "All the tools have a consistent IDE."

Dreamweaver MX combines the RAD features of Ultradev and the code-editing capability of the former HomeSite tool, Allaire explained. Ultradev and ColdFusion Studio as stand-alone products will disappear, he added, but HomeSite 5 will continue to be available. Macromedia Studio MX is expected to ship this month at an introductory price of $799. Dreamweaver MX sells for $399, with upgrades from Dreamweaver, Ultradev and ColdFusion Studio costing $199. Fireworks MX sells for $299. ■

.NET Framework, Unified Process 'Jolt' SD Expo

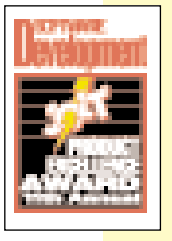
BY ALAN ZEICHICK

SAN JOSE, CALIF. — It's a 12-year-old tradition, so why stop now? The presentation of Software Development Magazine's Jolt Awards was a highlight of CMP Media LLC's SD Expo conference, held here in late April.

A field of more than 700 nominees was narrowed down to 49 tools in six categories by the Jolt judges, which included the magazine's editor-in-chief, Alexa Weber Morales, and technical editor John Reitano, who joined the publication in late 2001, as well as SD Times editor-in-chief Alan Zeichick and contributing editor Andrew Binstock, and many current and former writers for Software Development Magazine.

The top prizes were the six Jolt Awards themselves, which are intended to recognize the products—including tools, books and Web sites—that had the greatest impact on the software development community in the previous calendar year. Those honors went to Joshua Bloch's **"Effective Java"** (published by Addison-Wesley), Google Inc.'s **Groups** discussion forum system, IntelliJ Software's **IDEA** IDE for Java, Microsoft Corp.'s **.NET Framework**, Rational Software Corp.'s **Unified Process** and Sitraka Inc.'s **JProbe Suite**.

The magazine also gave out 17 other Productivity Awards, lauding products that are valuable for development teams but didn't have the same impact as the Jolt Award winners. Employees of Sun Microsystems Inc. will probably be less than overjoyed at the awarding of a Productivity Award to J2EE in the Libraries, Frameworks and Components category, a second-place award compared with Microsoft's winning the Jolt Award for the .NET Framework, though Sun officially declined comment.



"Amid all the hype and the strong sentiments that inevitably surround Microsoft, I'm pleased that the judges were able to focus on the truly grand scope of the .NET Framework," Morales told SD Times. "While pieces of the Common Language Runtime and other components are arguably derivative of the virtual machine concepts pioneered by Java, Microsoft was thinking big when they tied all these pieces together in a multilanguage fashion."

This year, Software Development Magazine also inducted Borland Software Corp. into its Hall of Fame, which is intended to recognize companies and products that continually have had a significant impact on the software development community. It also offered a first-ever Honorary Productivity Award to "Ruled White Index Cards," making the point that when it comes to development, tried-and-true techniques and best practices—and not silver-bullet new products—are often the best tools of the trade.

"Some were concerned that allowing a stationery product to make the list of finalists diminished the gravitas of the awards," said Morales. "Ultimately, I think we handled it well—the reason cards made the final vote was because they really represent a way of thinking about requirements and communication that has come to the forefront in the past year, especially, with the emergence of Extreme Programming and agile processes. [Also] while we take the awards very seriously, there's a place for moments of levity in the event." ■

Books

Jolt Award: "Effective Java" by Joshua Bloch (Addison-Wesley)

Productivity Award: "Agile Software Development" by Alistair Cockburn (Addison-Wesley)

Productivity Award: "Software Craftsmanship" by Pete McBreen (Addison-Wesley)

Productivity Award: "Under Pressure and On Time" by Ed Sullivan (Microsoft Press)

Design Tools and Processes

Jolt Award: Unified Process (Rational)

Productivity Award: Describe (Embarcadero)

Productivity Award: Sitespring (Macromedia)

Languages and Development Environments

Jolt Award: IDEA (IntelliJ)

Productivity Award: Delphi 6 and Kylix 2 (Borland)

Productivity Award: JBuilder (Borland)

Productivity Award: Visual Studio .NET (Microsoft)

Libraries, Frameworks and Components

Jolt Award: .NET Framework (Microsoft)

Productivity Award: Java 2 Enterprise Edition (Sun)

Productivity Award: JRules (ILOG)

Productivity Award: Qt (Trolltech)

Utilities

Jolt Award: JProbe Suite (Sitraka)

Productivity Award: Ant (Apache)

Productivity Award: DashO-Pro (preEmptive)

Productivity Award: VM Workstation (VMware)

Web Sites and Developer Networks

Jolt Award: Groups (Google)

Productivity Award: developerWorks (IBM)

Productivity Award: MSDN (Microsoft)

Productivity Award: WikiWikiWeb (Alpha Infinity)

Hall of Fame

Borland Software Corp.

Honorary Productivity Award

Ruled White Index Cards

News Briefs

COMPANIES

Herzum Software LLC, an enterprise architecture consultant, and **MetaMatrix Inc.**, a data management solutions provider, have partnered to promote component-based application development and model-driven information integration. MetaMatrix provides a platform through which businesses can get access to disparate data and information systems . . . **Novell Inc.** and **Information Architects Inc.** have agreed to bring together Novell's security services with IA's development environment for repackaging content from multiple sources without custom coding. IA's technology will be included in Novell's Active Information Portal, which delivers real-time information to an organization's employees . . . **Acumen Advanced Technologies Inc.** has licensed its Private UDDI Standard Edition software to **BEA Systems Inc.**; the UDDI registry software is included with BEA's WebLogic Server 7.0. The UDDI registry, which supports both LDAP and relational databases as the UDDI repository, also is available as a stand-alone product . . . **TIBCO Software Inc.** has completed its acquisition of **Talarian Corp.**, which was begun on Jan. 5. The Talarian name will cease to exist, with SmartSockets and SmartPGM now becoming products in TIBCO's Active Enterprise product line. TIBCO acquired Talarian in a stock and cash transaction valued at approximately $115 million.

PRODUCTS

Crystal Decisions Inc.'s **Crystal Enterprise 8.5** was made generally available May 1 with new support for AIX and Solaris, and integrations with a larger number of security mechanisms. In the past, Crystal Enterprise ran only on Windows platforms . . . SolarMetric Inc. has released version 2.2.4 of **Kodo JDO**, its Java Data Objects implementation for transparent persistence with high-performance caching features and support for Prepared Statements in queries . . . ObjectVenture Inc. has integrated its **ObjectAssembler J2EE** tool with Sun's **Sun ONE Studio** (formerly known as Forte for Java) . . . ArtinSoft has released the beta of **WinToWeb Conversion Assistant**, which converts Visual Studio .NET's Windows Forms to ASP.NET's Web Forms. The tool also converts ActiveX components to .NET components. General availability is promised by June . . . Excelsior LLC has released what it calls a high-performance J2SE 1.4-compliant Java Virtual Machine for Windows. **Jet 2.5** comes in three versions: a free personal edition, a $350/developer standard edition with limited support for dynamic class loading, and a $1,200/developer professional edition, which uses a caching JIT compiler for dynamic class loading . . . Microsoft Corp. has committed to creating a version of 64-bit Windows for Advanced Micro Devices Inc.'s forthcoming **Hammer** processors. Hammer is a 64-bit extension of the *x*86 architecture, and is due out later this year . . . IBM Corp. has released a version of its **WebSphere Studio Application Developer** IDE for Linux, as well as **WebSphere Studio Site Developer**, a tool for integrating Java, XML and Web services. IBM also has new plug-ins for WebSphere Studio for developing wireless, voice and portal apps . . . Reliable Software Inc. has enhanced its peer-to-peer version control system for Windows. **Code Co-op 3.3** now works with Borland's C++ Builder and Delphi, in addition to Visual Studio .NET, and includes e-mail dispatching of code change notices. The product costs $145 per seat . . . MKS Inc. has updated its **Implementor** configuration management system for IBM's AS/400 and iSeries servers. The version 5.3 release integrates with the company's Integrity Manager workflow system, and can work with IBM's DB2/400 database . . . The beta of Basis International Ltd.'s **BBj 2.0**, a cross-platform system that combines Java with the Business Basic programming language for Web-based distributed computing, is now available, with final availability scheduled for early May. The new release has a new thin client for running Business Basic applications, can run character-based apps in a browser, and has improved JDBC/ODBC connectivity . . . XML-to-Java bindings are now provided by **XML-Serializer** from Adaptinet Inc. The new tool, priced at $49.95 per developer seat, works with both DTDs and XML schemas, and

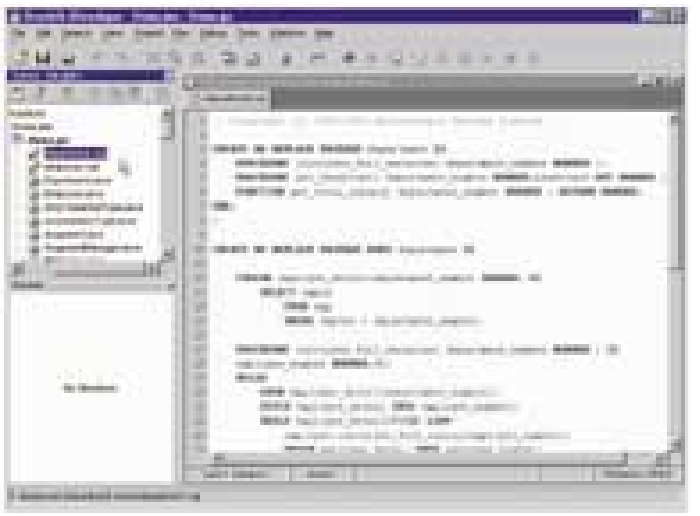
▸ continued on page 15

Quintessence Converts PL/SQL to Java

Migration tool makes Oracle database 'a commodity'

BY ALAN ZEICHICK

Are you an Oracle customer considering a Java strategy but sitting on a few million lines of PL/SQL code? Quintessence Systems has a downloadable application that, according to CEO Elton Barendse, completely automates the migration process, and at a rate of about 2 million lines of code per hour.



The in2j application migrates code from Oracle's PL/SQL language to Java.

According to Barendse, his company's new in2j tool "provides a complete automated source code migration from Oracle to Java," working on PL/SQL currently, with support for Oracle Forms expected by June.

The benefit of the tool (www.in2j.com), which is offered free of charge for evaluation, and with license fees due only if the migrated code is deployed, is vendor portability. "in2j effectively liberates customers from Oracle's proprietary vice-like grip," claimed Barendse. "Move your business logic to Java and into the middle tier, and your Oracle database rapidly starts looking like a commodity."

Quintessence's technical documentation claims that the migration is completely automated. "We define '100% automated migration' as the capability to transform source code written in one language into Java source that will compile and execute with no programming intervention whatsoever," it says. "Following an in2j migration, the only remaining steps are the installation and integration of the generated software components." The migration tool runs on a Windows workstation.

The company also supplies a Java application framework, which must be used to deploy the completed Java code. This is also free for evaluation, but must be licensed for deployment or commercial distribution of the migrated code. There is no charge for this license, according to Quintessence.

The license cost for deployment ranges from 75 cents to 25 cents per line of code, depending on the size of the application, with a $5,000 per-project minimum. This comes to $37,500 for an application with 50,000 lines of PL/SQL code, according to Barendse, or $665,500 for an application with 2 million lines of code. ▮

CodeCharge Gets Visual Boost With Studio

BY DAVID RUBINSTEIN

When 2-year-old YesSoftware introduced its CodeCharge Web application development tool, the focus was on programming. The release of CodeCharge Studio this month adds the visual elements to which Web designers are more accustomed.

"It's almost like [Microsoft's] Visual Studio on a simpler level," said company founder and CEO Konrad Musial. "Our strength is code generation and prebuilding applications that developers can customize without much coding."

CodeCharge Studio, Musial said, unites the CodeCharge 2.0 tool with IDE features such as an HTML design interface, HTML and code editors, components and wizards. Developers design a prototype version of their software, and CodeCharge automatically generates the source code for the prototype, which the developers then can complete with a limited amount of programming, Musial explained. A new Power Wizard can automatically convert a whole database into a Web application, Musial claimed. A user would specify the database tables to be used in the application and can generate a search page with a grid and a data maintenance page, as well as menus for displaying the tables and a user authentication page, he explained.

CodeCharge Studio "is a starting point for developers," he said. "They can then use the interface to rearrange everything on the page, add graphics or programming logic, to expand the basic application. Things are getting more sophisticated for Web application developers."

Developers can modify the generated code; in CodeCharge 2.0, the code is generated in blocks, and the color of the code blocks changes when modifications have been made so the modifications are not overwritten the next time the code is generated, Musial explained.

The company (www.yessoftware.com) also has created an add-in for Microsoft's FrontPage Web development tool, which Musial said provides FrontPage developers with a full IDE for generating code in server-side languages such as ASP, ColdFusion, Java, PHP, Perl and C#. YesSoftware also has completed an integration with Adobe's GoLive. The Studio sells for $499.95 per developer seat but can be purchased at an introductory price of $279.95 through the end of July. ▮

Software Development Times (ISSN #1528-1965, USPS #001-9625) is published 24 times a year by BZ Media LLC, 2 East Main Street, Oyster Bay, NY 11771. Periodicals postage paid at Oyster Bay, NY and additional offices. POSTMASTER: Send address changes to SD Times, 2 East Main Street, Oyster Bay, NY 11771. SD Times is a registered trademark of BZ Media LLC.

The world's most popular **mobile database is now even more powerful and secure** than ever before.

SQL Anywhere® Studio 8

It's the next generation from the leader in mobile database solutions. Loaded with superior out-of-the-box performance capabilities, it features enhanced query processing and advanced indexing to get enterprise information to your mobile workers. Fast. As for security, well, it's never been tighter. Strong encryption provides true end-to-end security from the enterprise to the mobile device. So everyone's protected from the dangers of unauthorized access. See how the leader just got further ahead. Visit www.ianywhere.com/mobilepower for a free evaluation copy of SQL Anywhere Studio 8.

iAnywhere™ SOLUTIONS A SYBASE COMPANY

©2002 iAnywhere Solutions, Inc. All rights reserved. iAnywhere Solutions, SQL Anywhere and Sybase are trademarks or registered trademarks of Sybase, Inc. or its subsidiaries. AIAIWC2

Perforce SCM Supports Unicode, .NET

BY CHRISTINA M. PURPI

Perforce Software Inc. has released a new version of Perforce SCM System to support Unicode and Microsoft's .NET development environment.

According to Kent Laux, director of technical marketing at Perforce (www.perforce.com), the system has two other important new features. The first is a group-based server utilization policy. "What this does is, if someone were to issue a wrong command, a runaway, reporting or querying-type command, the SCM will cancel it," he said. "It looks for long-running commands, and then allows you to resubmit the command when the server is not busy."

The other enhancement allows the Windows installer for Perforce to be customized by a site administrator. "Customization of the Windows client can control how the client is installed, which can be handy for large sites so you don't have to reconfigure the client," explained Laux.

The newest version of Perforce SCM supports Unicode, which allows the Perforce server to store files from any language or character set in any country. In addition, version 2002.1 provides support for Microsoft's .NET development environment. Laux added that the new version also contains performance enhancements.

Available now, Perforce 2002.1 costs $750 per developer seat. ▮

Parasoft Offers Web Services Testing Tool

BY CHRISTINA M. PURPI

Parasoft Corp. last month released SOAPtest, a new Web services testing and monitoring tool, to general availability.

According to Adam Kolawa, CEO of Parasoft, (www.parasoft.com) SOAPtest can perform load testing of Web services servers, message monitoring, and regression testing on deployed Web services, and has the ability to test both the SOAP server and the SOAP client.

"You're either producing or consuming Web services, so you need the ability to validate what you are producing or consuming. SOAPtest allows you to look at both sides [of Web services] and quickly determine if there are problems and where the problems are," said Gary Brunell, Parasoft's vice president of professional services.

SOAPtest includes a wizard for creating artificial intelligence rules, which Kolawa said enhances the security of Web services by preventing errors from multiplying. It also has scripting support for Python, Java and JavaScript, and a multilayer verification feature, which pinpoints the exact layer in which errors occur.

Kolawa claimed that there is no other product that tests SOAP for Web services. "Web services is a brand-new concept; nobody has come up with the product [to test] yet."

SOAPtest is available now for download, with pricing starting at $50,000 for 25 seats, according to Kolawa. ▮

"TeamShare® had just what we wanted...

functionality, scalability, the right price, Web architecture, integration with other vendors, great support staff and a product management group that really listens to its customers."

David S. Lee,
Technical Operations Manager, Managed Objects

The Client.

Managed Objects produces a software platform called Formula®, which helps companies understand how their underlying technology impacts their top-line business.

The Challenge.

To find a solution that would best integrate customer enhancement requests into Formula® product lifecycle.

The Solution.

TeamTrack's® feature-rich and highly configurable Web-architected solution gave Managed Objects the ability to streamline and enforce their processes while integrating customer feedback into the development loop.

For more information or for an online demonstration, call:

1.888.832.6742

www.teamshare.com

TeamShare® and TeamTrack® are registered trademarks of TeamShare, Inc. All other trademarks used are the property of their respective owners.

TeamTrack®

from teamshare®

CA Updates Portal, Revamps AllFusion

BY CHRISTINA M. PURPI

Computer Associates International Inc. at its annual CA World Conference last month released version 4.0 of its CleverPath Portal and rolled all of its AllFusion application lifecycle management products into three suites.

According to CA, CleverPath Portal 4.0 is now compliant with Web services standards such as WSDL, SOAP and UDDI, and has support for Linux running on IBM's zSeries mainframes. Additional new features include more advanced tools for integrating third-party applications via Web services and wireless functionality that can detect device type for the tailoring of content.

In a separate announcement, CA upgraded and enhanced the majority of its AllFusion product line, which now is divided into three integrated product suites. The Modeling Suite has new workgroup and multiuser capabilities, in addition to model management services including conflict resolution, versioning and security. The Change Management Suite will include a beta version of Change Manager Enterprise Workbench that integrates development processes across mainframes and distributed platforms.

Harvest Change Manager version 5.1, also part of the Change Management Suite, is now embedded into Microsoft's Visual Studio .NET and IBM's WebSphere IDEs. A beta of Endevor Change Manager version 4.0, set to be available this month, is being enhanced to include Unix Systems Services support.

The Process Management Suite now supports Windows XP and Apache Tomcat. ▮

SUITE DEALS

AllFusion Modeling Suite
Model Manager, Erwin Data Modeler, Data Model Validator, Process Modeler, Component Modeler

AllFusion Change Management Suite
Change Manager Enterprise Workbench, Harvest Change Manager, Endevor Change Manager

AllFusion Process Management Suite
Project Engineer, Project Planner, Project Timesheet, Office Console Advisor

SlickEdit Gets Major Upgrade

BY CHRISTINA M. PURPI

SlickEdit Inc. has released version 7 of its Visual SlickEdit code-editing environment, which now includes a Java debugger, an EJB wizard and some advanced XML editing capabilities.

Visual SlickEdit hasn't had a major upgrade since November 2000, according to Sandy Smith, director of product management and marketing.

The company (www.slickedit.com) added new XML editing capabilities, such as document validation, schemas, DTDs and multiple encodings, as well as new support for XML, .NET and Unicode. "This enables developers to use SlickEdit side by side with Visual Studio .NET," claimed Smith.

There are also new HTML editing capabilities, including syntax expansions, automatic indenting, open URL into a buffer and XHTML support.

SlickEdit 7, now available, is priced at $299 per user for FreeBSD, Linux and Windows, $399 for Unix, and $2,999 for a version for IBM's OS/390- and z/OS-based mainframes. ▮

Freedom TO Create

Rational®
the software development company

Rational User Conference 2002

August 18 - 22, 2002

Lake Buena Vista, Florida

Walt Disney World Swan & Dolphin

For more information or to register, visit

www.rational.com/ruc or call (888) 889-0074.

Join us at the Rational User Conference 2002 as we celebrate the ingenuity, craftsmanship, and sheer resourcefulness of the software development professional. Whether you write code, test software, manage resources, design systems, define requirements, manage releases, or lead projects you need to be part of this information-packed event!

Participate in interactive events and conference activities including targeted tracks, pre- and post-conference training sessions, hands-on workshops, Rational Solution Center, and our comprehensive exhibit hall! This year we are offering more than 200 technical sessions designed for Rational users with skills ranging from novice to advanced—plus we have added NEW tracks and topics that include Model-Driven Development, .NET, Java, and Embedded Systems Development.

Register Early and Save!

be liberated

Rational, the Rational logo, Rational Suite and TestStudio, among others, are trademarks or registered trademarks of Rational Software Corporation in the United States and in other countries. ALL RIGHTS RESERVED. Made in the U.S.A. © 2002 Rational Software Corporation.

WS-I

◂ continued from page 1

main goal to enable and assure customers that they are creating Web services that will be interoperable with other companies' Web services. These test suites will assure a company that its Web services conform to accepted Web services profiles. Yet, "it is unclear at present when and how updated versions of Web services standards will be adopted," McGonnell said. In addition, he said the specific testing tools are still in the process of being defined and it's too early to provide any details; however, vendors or Web services providers will be self-certifying, with an expected review by competitors and the trade press.

McGonnell explained that because the organization is relatively new, "we're starting out focusing more on the low-level standards such as WSDL, SOAP and UDDI." However, in the long term, he would like to see WS-I "start taking on interoperability projects with regards to security, transactions and conversations between services."

The Basic Web Services Profile Working Group concentrates on creating and documenting best practices for implementing existing Web services specifications such as SOAP, XML and UDDI. Also, by defining the implementation of existing standards, WS-I will be able to make recommendations to standards bodies such as the W3C for improving those specifications, according to McGonnell.

The Sample Applications Working Group is geared toward providing samples of actual Web services that conform to specifications and that already have been done, McGonnell said. "This will allow businesses to better understand technology and create Web services more easily. It's a good starting point."

All three of the working groups are in the process of identifying specific deliverables and timelines, according to McGonnell. "Road maps have not yet been defined, although the first set of deliverables [is] expected in the next six months."

Ron Palmeri, vice president of business development at Grand Central Communications Inc., a Web services infrastructure provider and a WS-I member, said the role of the organization is to communicate to the marketplace that everything will work together. "We're not trying to replicate work that other standards bodies are already working on," said Palmeri. "The WS-I does not own the actual standards, and so is not trying to define them."

When asked about basing an entire organization on testing interoperability with specifications that, in several cases, are in preliminary form, Palmeri commented, "These standards will continue to evolve. The only way you can do any kind of interoperability is to put a stake in the ground and say, we're going to use SOAP version *x*, WSDL version *y* and UDDI version *z*, and that makes up the base profile."

John Hanger, senior vice president of sales and marketing at Flamenco Corp., also a member of the organization, sees the WS-I as "subject to all of the political scenarios that are typical of a standards body that have existed in the past. [That includes obstacles] such as large corporations who have business agendas in addition to standard agendas. There is an obvious risk that things could go awry, but I haven't seen an indication [of that] yet other than the whole riff around Sun and their participation or nonparticipation" (see "WS-I: Another Standards Battle Begins," page 27). ▮

Can your applications be extended to implement the new 30 day sales promotion before the 30 days are up?

why not?

With Versata You Can.

Versata enables you to add new business logic as rules and processes to existing applications and manage this business logic declaratively, without having to write heaps of code. Much like a relational database manages business data, Versata manages business logic. You specify the requirement and that requirement is directly executed.

And thanks to Versata, a Fortune 500 financial services company is doing just that - adding new policies and procedures in days, not months.

Declarative Business Logic
Faster. Smarter. Better.

Learn more at www.versata.com/extend

versata

SUN

◂ continued from page 1

able prior to the release of JDO 1.0, it was not compliant with the spec. Russell is now with Sun's server team—the former iPlanet group—where he said work is under way on a new Sun implementation of JDO, but he could not say when it will be available.

What was also puzzling about Sun's notification was that it contained a recommendation for developers in need of transparent persistence to adopt Thought Inc.'s CocoBase, an object-relational database mapping tool that also is not JDO-compliant.

This baffled Thought CTO Ward Mullins. "The official reason they are discontinuing the tool is that their implementation is not JDO-compliant. But if that's true, why did they recommend us? We're not JDO-compliant either." Mullins has been an outspoken opponent of JDO 1.0 for many reasons, one of which is its lack of mapping specifications. "There's nothing in the spec about object-relational mapping or how objects get mapped to relational databases."

Yet Sun's Russell said the omission was intentional. "We didn't want people to get confused that this was a mapping standard, because it really goes far beyond object-relational mapping."

FROM ODMG TO JCP

Mullins also alleges that JDO 1.0 is little more than a rehashing of a failed set of specifications once attempted by the Object Data Management Group (www.odmg.org). "They've changed the name to protect the innocent, but it's basically a rewrite of the ODMG's API specs with very few real changes." Russell admits a relationship. "When JSR-12 [JDO] was started," he said, "there was early work being done by an ODMG committee on defining an interface, but the process wasn't getting the community involvement. Rather than abandoning what was supposed to become ODMG 4.0, they [decided to] donate the IP to the Java Community Process."

But Russell said that JDO 1.0 and the ODMG specs share little today. "There's almost no similarities between them. The ODMG property file is non-XML metadata that contains three keywords and seven parameters. JDO uses XML that defines eight elements and 22 attributes," he said. He admitted that JDO kept some of ODMG's transaction methods, including begin, commit and rollback, and that it retained and renamed some of its database methods.

Mullins and Russell had engaged in a months-long exchange on a developer Web site (www.theserverside.com/discussion/thread.jsp?thread_id=771), during which Mullins claims he pointed out flaws in JSR-12, and that his input was ignored. Thought Inc. is not a member of the JCP. Russell characterized Mullins' input as flames. "Ward has an ax to grind," he said, but would not elaborate.

Dirk Bartels, president and CEO of object database developer Poet Software Corp. (www.poet.com), whose company maintains the JDO-centric Web portal jdocentral.com, added that Sun's removal of its JDO implementation from Forte is not significant. "I wouldn't worry about it. A number of other IDE vendors are interested in potentially bundling [their own implementation] over time. JDO is a young standard that is still maturing. When you look at jdo.central.com, there's a variety of products from charter members to work with that are open." ▮

Programmer's Paradise®
Your best source for Microsoft® Visual Studio® .NET!

Even More Information... on these BEST SELLERS!
• Demos • White Papers • Benefits
Visit the "doorway" page on our Web site assigned to each featured publisher.
Example: www.programmersparadise.com/companyname
NEW!

SOFTWARE DEVELOPMENT MANAGERS!

Are you looking for assistance in finding quality tools for your development teams—at prices that will make the CFO smile?
Contact our Programmer's Paradise Corporate Services Group.
Our Corporate Services Managers are technically trained on thousands of top IDEs, tools, components and utilities. They're savvy about licensing opportunities, software subscription services, maintenance programs and much more.
They've assisted outfitting hundreds of thousands of software development teams with the right set of products to get the job done. And they are responsive—every account manager is teamed with a client services support representative to make sure that you're getting answers and solutions—right away!
Whether it's software, hardware, technical publications or services, the Programmer's Paradise Corporate Services Group can help you get the most out of your budget!
Contact Nadia Hosain at 800-445-7899 extension 7253, and ask to be assigned your personal Corporate Services Manager today!

SOFTWARE LICENSING OPPORTUNITIES AT PROGRAMMER'S PARADISE
Many of the IDEs, DBMSs, tools and utilities you're seeking can be purchased under license agreements—at significant per seat savings!
Call our Programmer's Paradise Corporate Services Group today and ask about license programs for:
Adobe, Borland, CITRIX, ca, COREL, crystal decisions, Executive Software, IBM, macromedia, Microsoft, ORACLE, PowerQuest, symantec, VERITAS, watchfire, webGAIN, WRQ ...and Save!

Microsoft® Visual Studio® .NET Upgrades
TERRIFIC PRICES!
Enterprise Developer Upgrade
$985.99 - $300 REBATE = $685.99*
Professional Upgrade
$495.99 - $300 REBATE = $195.99*
Enterprise Architect Upgrade
$1,655.99 - $300 REBATE = $1,355.99*
NEW!
* Free after manufacturer's mail-in rebate
www.programmersparadise.com/microsoft

NetAdvantage Suite
by Infragistics
Infragistics proudly presents an unprecedented range and depth of presentation-layer controls—UltraSuite, UltraWebSuite and UltraWebSuite—in one offering. The NetAdvantage Suite is the ONE fully integrated suite you'll ever need to create the most flexible, advanced applications for any Microsoft environment. We provide high-performance, superior tools; Grid, Scheduling, Charting, Toolbars, Menus, Tree, UI and Editing Components and more, in GDI, Windows Forms (for Visual Studio .NET) and Web Forms (for ASP.NET).
NEW!
Paradise # IOM 0LA0
$679.99
www.programmersparadise.com/infragistics

Macromedia® Flash™ MX
by Macromedia
Macromedia Flash MX provides everything you need to create and deploy rich Web content and powerful applications. Whether you are designing motion graphics or building data-driven applications, Flash MX has the tools you need to produce great results and deliver the best user experiences across multiple platforms and devices.
NEW!

Flash MX Paradise # M02 0141 $458.99
Flash MX Upgrade Paradise # M02 0143 $188.99
www.programmersparadise.com/macromedia

HP LaserJet 4100n Printer
by Hewlett Packard
HP LaserJet 4100 Series workgroup printers deliver the highest value in their class, with more speed, more capacity, and new "intelligent" printer-management features. Manage your business-critical information smarter, faster, and easier with HP's most advanced workgroup laser printer.
Special!

Paradise # ZHI 049833
$1,528.99

FREE Catalog!

100+ pages of products and information for developers!
Get a FREE subscription to our catalog by calling
800-445-7899
or subscribe at programmersparadise.com

Subscribe to our Weekly "Island Insider"
• Promotions
• Special offers
• Breaking news
• Emailed to you each week!

programmersparadise.com

800-445-7899 • programmersparadise.com

APACHE

◂ continued from page 1

Associates Inc., said, "Apache told Sun to treat open source as an equal. It's an example of the moral force Apache carries. This is the moral force of a reasonable participant in a process."

Brian Behlendorf, co-founder and self-titled "ringleader" of Apache (www.apache.org), is modest about the organization's gains. "By being able to point to the numbers of people using [Apache implementations], we gained a degree of influence," said Behlendorf, who also serves as CEO of CollabNet Inc. "We've also been lucky to have developers who are eloquent in speaking to the corporate community, to explain that, hey, there is some process here" for developing software.

The seeds for Apache were planted in the early 1990s, when a group of 10 people began working with the National Center for Supercomputing Applications (NCSA) Web server, sharing the source code on mailing lists and bulletin boards and creating patches to improve the server. The group banded together with their patches, and Apache was formed in 1995. "We didn't want the layer to be owned by Netscape or AOL or Microsoft," Behlendorf explained. "We didn't want licenses to restrict us from doing what we were doing."

From the Web server project, Apache moved on to Jakarta, its open-source Java project, which began with what Behlendorf called a paranoia of big companies moving standards in their direction. "Java is as much about syntax as it is about political control over the APIs," he said. "The ability to modify and redistribute is key to open source, but was not allowed."

Apache approached Sun to work on a Java servlet API—"because it was used the most," Behlendorf explained—and the Tomcat project was begun. "But that still left over a hundred standards in limbo," he said. The barrier to implementation, he explained, was in the legal contracts and the licensing fees required for test conformance kits. So Apache told its developers to stop creating implementations that Apache did not have the legal right to distribute. It was this leverage, Behlendorf believes, that persuaded Sun to liberalize its JCP rules.

"If Sun is the [JCP] spec lead, most of the time it will allow for open-source implementations," Behlendorf said. "If some standards demand the use of patented algorithms, for example, Sun said they can't do anything." Behlendorf said Sun's concession still is not clearly defined, and that the Apache group is still waiting for the agreed-upon changes to be put into effect.

Onno Kluyt, manager of the JCP Program Management Office, said Sun invited Apache into the JCP in June 2000. "We invited them to the Executive Committee for two reasons. The main one is that Apache is a well-recognized open-source committee. They're also a good temperature-reader of the open-source committee at large, including other groups or efforts."

Kluyt emphasized that despite appearances, the deal negotiated between Sun and Apache for providing access to Java technology and test kits wasn't just to benefit Apache. "If it doesn't work for Apache, it likely won't work for any of the organizations or individuals who work in the open-source environment. Apache is the first step."

Standards and open source go hand-in-hand, according to O'Reilly. "They reinforce each other. An open-source project without standards doesn't build an ecosystem. Apache has been impressive, compared to the Netscape hype, partly because Apache held the line on standards to be the reference implementation people could count on."

CROSSING THE CHASM

That, to the thinking of Free Software Foundation founder Richard Stallman, is at the crux of the issue. "When [Apache comes] to a chasm, they're likely to say, 'Oh well, it's not worth the fight.' For us, it's about freedom to study, change and redistribute software."

Part of what makes Apache so important to commercial vendors is the liberal license, which allows them to incorporate the work of Apache into their proprietary products without returning their changes to Apache. That's not good in Stallman's book. "That denies users freedom," Stallman insists. "The [Apache] license permits you to make a nonfree extended version and distribute it without source code. If you benefit from freedoms, you must respect them for others. Apache would do better if they defended your freedoms."

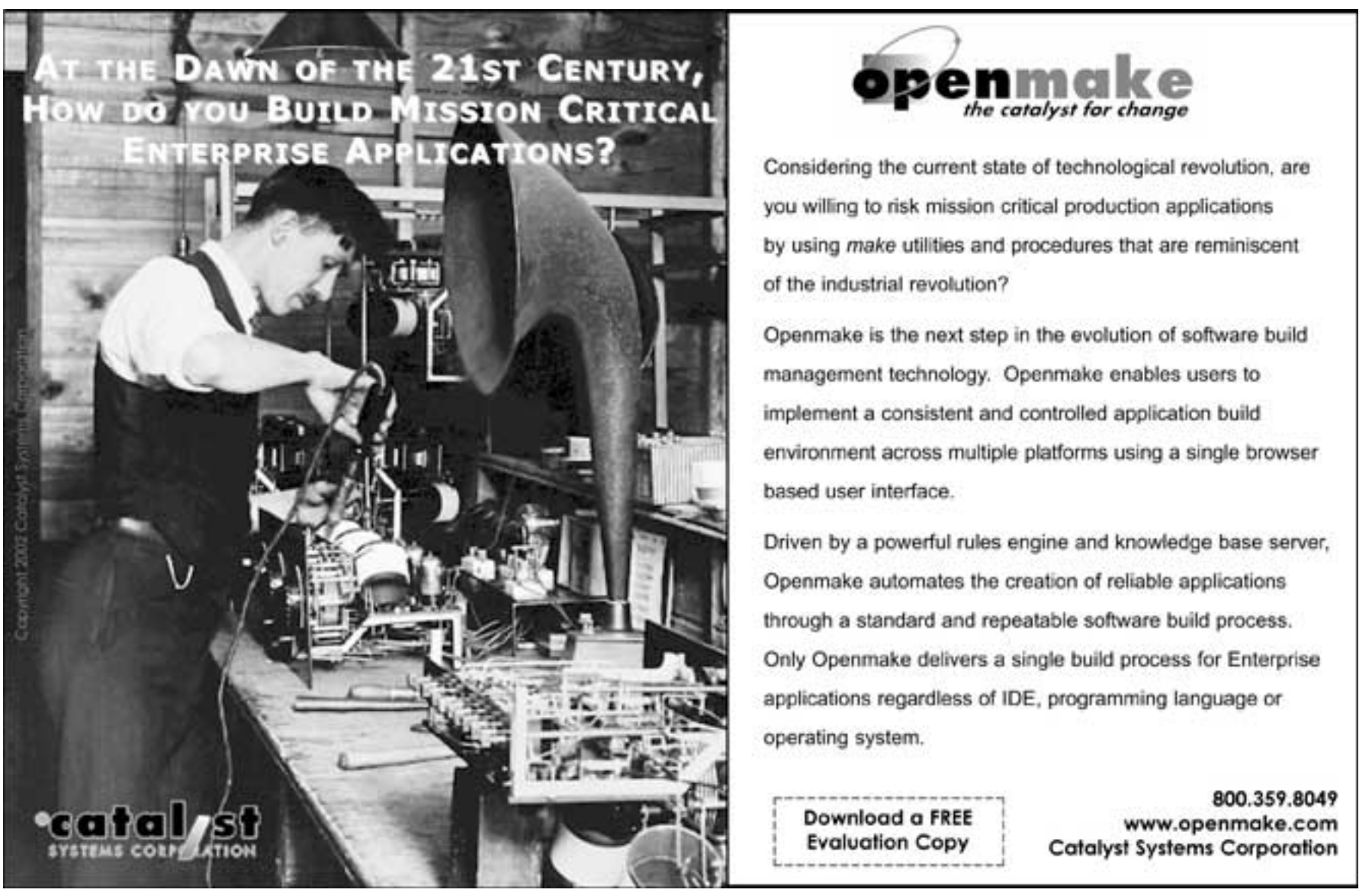
As for whether or not Apache speaks for the open-source community, Miller said, "That's like saying you can set the agenda for the anarchists' convention. Apache is an outstanding example of why open source works, but there is no agenda. They're just the poster boy."

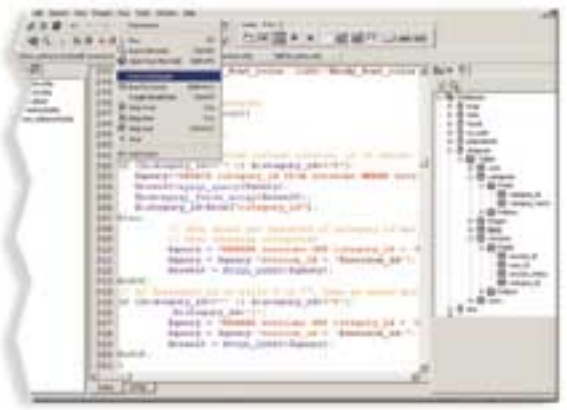
"Linux is the face of open source," O'Reilly said. "Apache has become the crossroads for development. It's not a religious issue; it's pragmatic." ▮

The Apache Software Foundation
http://www.apache.org/

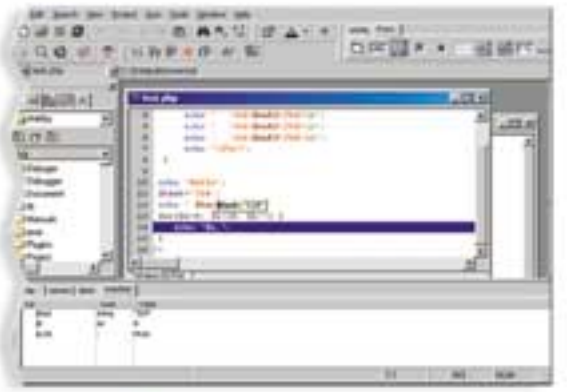
Founded: 1995
Executive board: Seven officers, including Roy T. Fielding (University of California, Irvine), chairman
Membership: 70
Commit access: 450
Projects: Web Server
Portable Runtime
Jakarta
XML, Perl, PHP, TCL
License: Apache Software License

Co-founder Brian Behlendorf





Design.



Debug.

Deploy.

NuSphere™

PHP lets you create interactive web pages that wow people. Now build those pages faster than ever with the integrated development environment for PHP – NuSphere PHPEd.

Imagine a built-in debugger that spiders through code, watching variables as statements are executed. With NuSphere PHPEd, you'll write code, debug it, preview it and deploy it, all from one place. You'll speed up development time.

It's time to celebrate. Because award-winning NuSphere PHPEd gives you color-coding, code completion, context sensitive debugging, remote deployment and much more. Now you can have everything you've always wanted for PHP. So get ready to build sites that build business.

For more information or to learn about our special offers, go to www.nusphere.com/na/phped_sdt

NuSphere is a registered trademark in Australia and Norway, and NuSphere and PHPEd are trademarks of NuSphere Corporation in the U.S. and other countries. Any other trademarks and/or service marks contained herein are the property of their respective owners.

Pratt & Whitney Certifies Engine to DO-178B Level-A With Aonix® ObjectAda® / Raven™

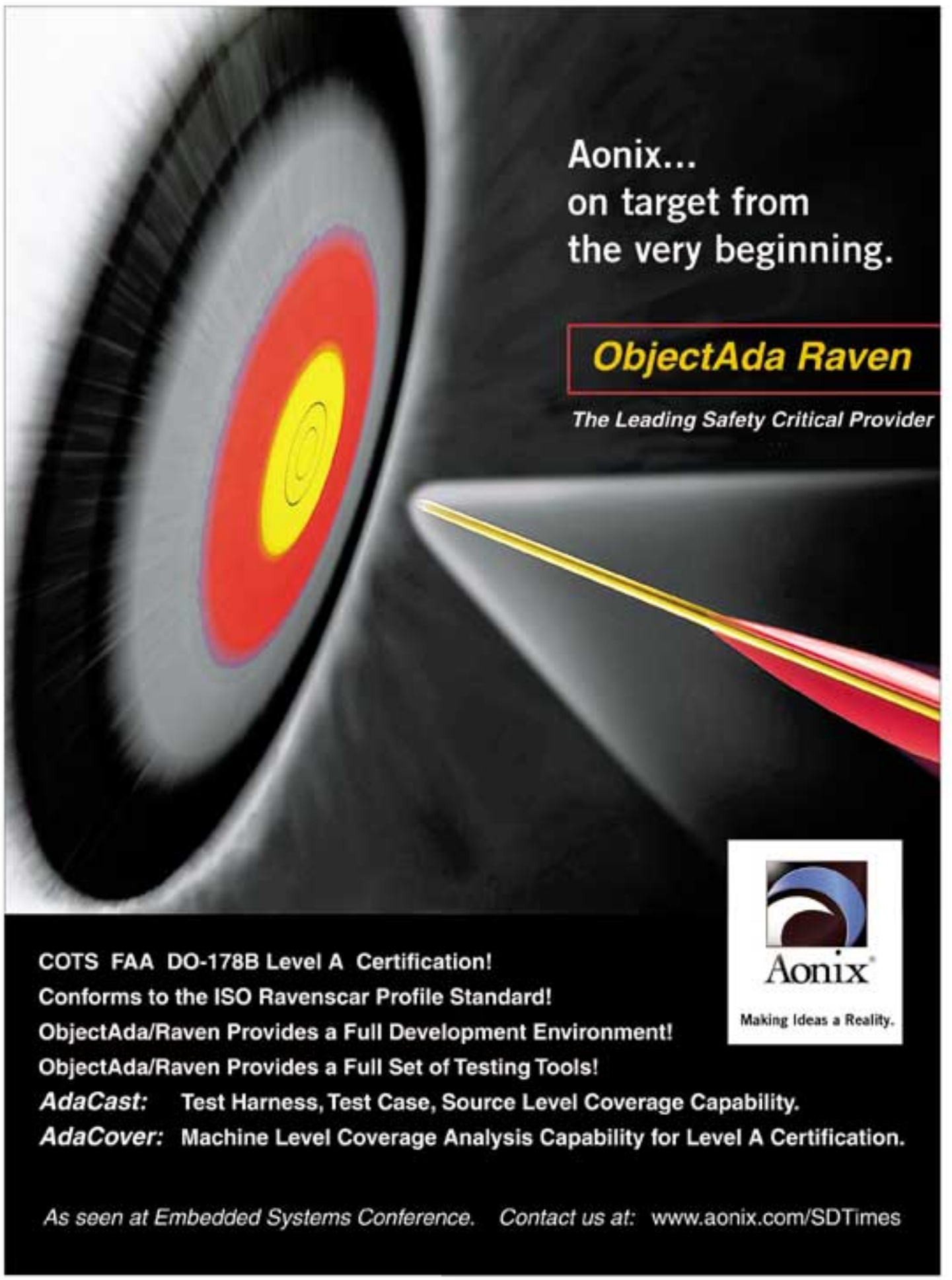
BOULDER, Colorado, January 24, 2002 - Aonix, a member of the Gores Technology Group and a leading provider of Ada 95 software development environments and safety critical solutions, has announced that Pratt & Whitney has successfully certified its newest commercial jet engine, the PW6000, using the **ObjectAda® / Raven™** runtime system.

The Pratt & Whitney certification was achieved at software Level-A of RTCA's DO-178B, Software Considerations in Airborne Systems and Equipment Certification. Certification to DO-178B requires that all COTS software included in the product be certified to the same standard as the core product. **ObjectAda/Raven** meets this standard for Level-A systems.

Pratt & Whitney incorporated the full suite of lifecycle artifacts provided by Aonix within the overall engine-system software documentation set approved for certification by the Federal Aviation Administration. By using the **ObjectAda/Raven** product and associated documentation, Pratt & Whitney was able to focus development efforts on its core competency of engine-system software, while ensuring that the run-time system portion of the product was developed and verified by experts in that domain. This approach reduced the schedule and technical risks associated with the program while also reducing development cost.

"Pratt & Whitney selected the **ObjectAda/Raven** product for use on the PW6000 in 1998 following an extensive evaluation. Aonix was selected for a variety of reasons including the usability of the tool set and the technical support that they were able to provide," states Bret Lynch, Manager, Real Time and Embedded Software for Pratt & Whitney. "The main discriminator, however, was the safety-critical domain experience of the company and their ability to meet the standards required for incorporation into a DO-178B Level-A software system."

Aonix is the leading supplier of certifiable run-time systems for the Ada 83 language and offers the only certified Ada 95 run-time system. ***ObjectAda/Raven*** *is certifiable to the highest certification levels and meets the* ***DO-178B Level-A*** *required by the FAA for airborne systems.*



Synthesizable ARM10 Core Set for July Release

ARM6 to target real-time, multimedia apps

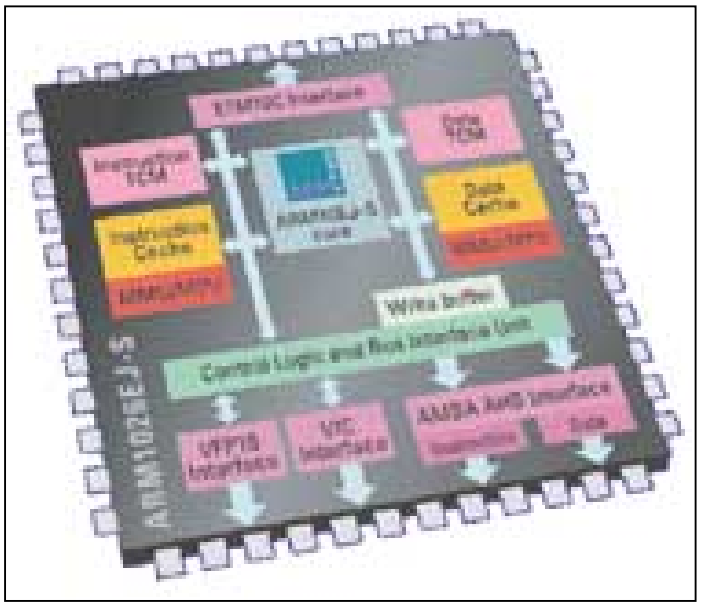
BY EDWARD J. CORREIA

ARM Ltd., a maker of RISC-based embedded processor cores, in July is scheduled to release ARM10EJ-S, a synthesizable version of its ARM10E core that the company says gives developers new control over how the core is configured, enabling them to select the optimal setup for performance and cost efficiency.

According to Eric Schorn, ARM's CPU product manager, ARM's synthesizable core makes it possible to optimize the size of processor caches and tightly coupled memories (TCMs) to best suit the application. Schorn described TCM as "a scratch-pad RAM that's directly attached to the processor," and used for storing data and/or instructions that the processor can access on a dedicated bus at very high speeds. "If it's a hard real-time application, you might prefer to lock down your code into the TCM, so that [its performance is] predictable."

Giving developers control over these parameters can help them save on hardware costs, he said. "If you have a small application, you don't want to [set aside] a huge [TCM], because that's going to cost you in die area."

The ARM10 improves performance over its ARM9 predecessor by incorporating 64-bit buses throughout, including its two system interfaces. Such duality improves performance, Schorn claimed, by allowing two instructions to pass in a single processor cycle, or by allowing 32-bit instructions and data to flow simultaneously. "Perhaps instructions are coming from Flash and the data from a streaming video peripheral. They can be coming from different sources and the core can exploit that parallelism." ARM first introduced dual 32-bit system interfaces on its ARM926 processor; all other ARM cores offer single system interfaces, he said.



The ARM10EJ-S processor core can be optimized to suit the application.

Tailoring the core can help save money, says ARM's Schorn.

Schorn insisted that despite its 64-bit buses, from a developer's perspective, the ARM10 appears as a 32-bit architecture. "If you look under the cover at what the hardware is doing, it's moving 32-bit units around in parallel using 64-bit buses. The instruction set all along has been 32-bit. The developer tools and applications stay the same, and all pre-existing code will run as is."

ARM's new ARM10 IP also will include Jazelle, the company's hardware implementation of the Java 2 Micro Edition VM. "Essentially, this removes a large part of the Java Virtual Machine interpreter code [from the software footprint of the target device], and replaces it with a small amount of hardware," according to Schorn.

He explained that rather than interpreting bytecodes step by step and emulating the necessary behavior in software, the hardware instruction decoder executes Java bytecodes directly and "tells the data path what to do to get the job done in hardware, cycle by cycle. This improves performance by approximately eight times and saves [device] power," he claimed.

Schorn insisted that Jazelle will run all Java applications. "Jazelle implements the bulk of the Java bytecodes in hardware, with a few exceptions patched up in software," he said. "We provide both the hardware and software reference design to [customers], who then integrate it with the operating system, so applications don't realize anything has changed. It's completely compatible with existing Java bytecode."

The company (www.arm.com) also has unveiled ARM6, the next generation of its processor architecture that it says will include new instructions targeted at multimedia and industrial control applications. ARM6 will be first implemented in the ARM11 processor core, and reach processor frequencies as fast as 500MHz.

"We've developed a lot of enhancements to accelerate audio and video performance," said Dave Cormie, also a CPU product manager at ARM. Other enhancements, he said, will come through collaboration with operating-system vendors including Microsoft, Symbian and Wind River, and will include accelerated real-time performance by way of better exception handling and interrupt response time, and improvements to the memory system architecture.

ARM6 is scheduled to begin shipping by year's end. ■

News Briefs

MORE PRODUCTS

◂ continued from page 4

automatically performs data type checking . . . BEA Systems Inc. announced the general availability of **Web Logic Server 7.0** last month. Enhancements were made in the areas of developer productivity, security and Web services support . . . The Imaging Source Europe GmbH has updated its royalty-free ActiveX/C++ text-editor class library for Windows. The new release, called **TX Text Control v9 Enterprise/XML**, includes a WYSIWYG XML editor, CSS, input validation with DTDs, and XML to RTF, HTML and Microsoft .DOC conversion. It is priced at $949 per developer seat . . . With version 2.5, Hit Software Inc.'s **DBMotion** data replication software, available this month, now allows real-time replication from Microsoft's SQL Server to DB2 running on IBM's AS/400 or iSeries servers. Pricing is $2,995 per server . . . Anysoft Inc. has shipped its **Digital Cortex** application tools, which create programmatic access to existing COM/ActiveX applications. Announced earlier this year, the company has lowered the prices to $199 per developer seat, $295 per deployed desktop and $7,500 per deployed server . . . Metrowerks Inc. has released **CodeWarrior Development Tools for intent**, allowing development of applications on Tao Group's intent media platform for such consumer appliances as set-top boxes, mobile phones, digital cameras and handheld computers. The intent platform is included with the CodeWarrior tools . . . Command Prompt Inc. has released **Mammoth PostgreSQL**, which the company claims is compatible with PostgreSQL 7.2.1, and includes support for SSL and APIs for C/C++, Perl and Python. The deluxe version includes a SQL/XML application server called LXP. It is available for Mac OS X and Red Hat Linux . . . Microsoft Corp. has formally released the beta of its **.NET Compact Framework**, a version of the .NET Framework for its Windows CE operating system.

PEOPLE

Michael Lehman, CFO of Sun Microsystems Inc., is retiring after nearly 15 years with the company, and will be replaced by **Steve McGowan**, currently VP of finance, planning and administration. Sun also promoted **Whitfield Diffie**, one of the inventors of public-key encryption, to chief security officer. Diffie had joined Sun Labs as a researcher in 1991 . . . Advanced Micro Devices Inc. has a new CEO, **Hector J. Ruiz**, who takes over from co-founder **William "Jerry" Sanders III**, who will stay on as chairman through 2003. Ruiz left Motorola to join AMD in 2000 as president and COO . . . **Jeff Rhodes** joins TeamShare Inc. as its new CEO. Previously, he served as president of HotelNet. TeamShare's previous CEO, **Bruce Huebner**, will remain in an advisory role with the company.

STANDARDS

IBM Corp. is making available **Enterprise Media Beans**, which the company says will provide a framework for rich media to be included in J2EE applications based on EJB Entity Beans without developers needing to know client type, server media protocols or media format. The JCP approved IBM's proposal to make this a specification by a 12-0 vote; it is known as JSR-86 . . . The JCP also has created a public review draft of JSR-52, **a Standard Tag Library for JavaServer Pages**, and of JSR-62, **Personal Profile Specification**; released a community review draft of JSR-75, **PDA Profile for J2ME**; released a proposed final draft spec for JSR-101, **Java APIs for XML-based RPC**; has approved JSR-110, **Java APIs for WSDL**; released a public review draft of JSR-118, **Mobile Information Device Profile**, and of JSR-139, **Connected Limited Device Profile**; and has a proposed final draft of **Java API for XML Registries 1.0** (JAXR) . . . The W3C has released its **Platform for Privacy Preferences 1.0** as an official W3C Recommendation; it describes a standard way to publish and read privacy policies . . . The group also released last call working drafts of the **XML 1.1**, **CCS3 Color** and **VoiceXML** specs, along with version 6.0 of its **Amaya** Web browser reference implementation . . . A joint committee of the W3C and the IETF released a working draft of their **XML Signature XPath Filter spec**. ■

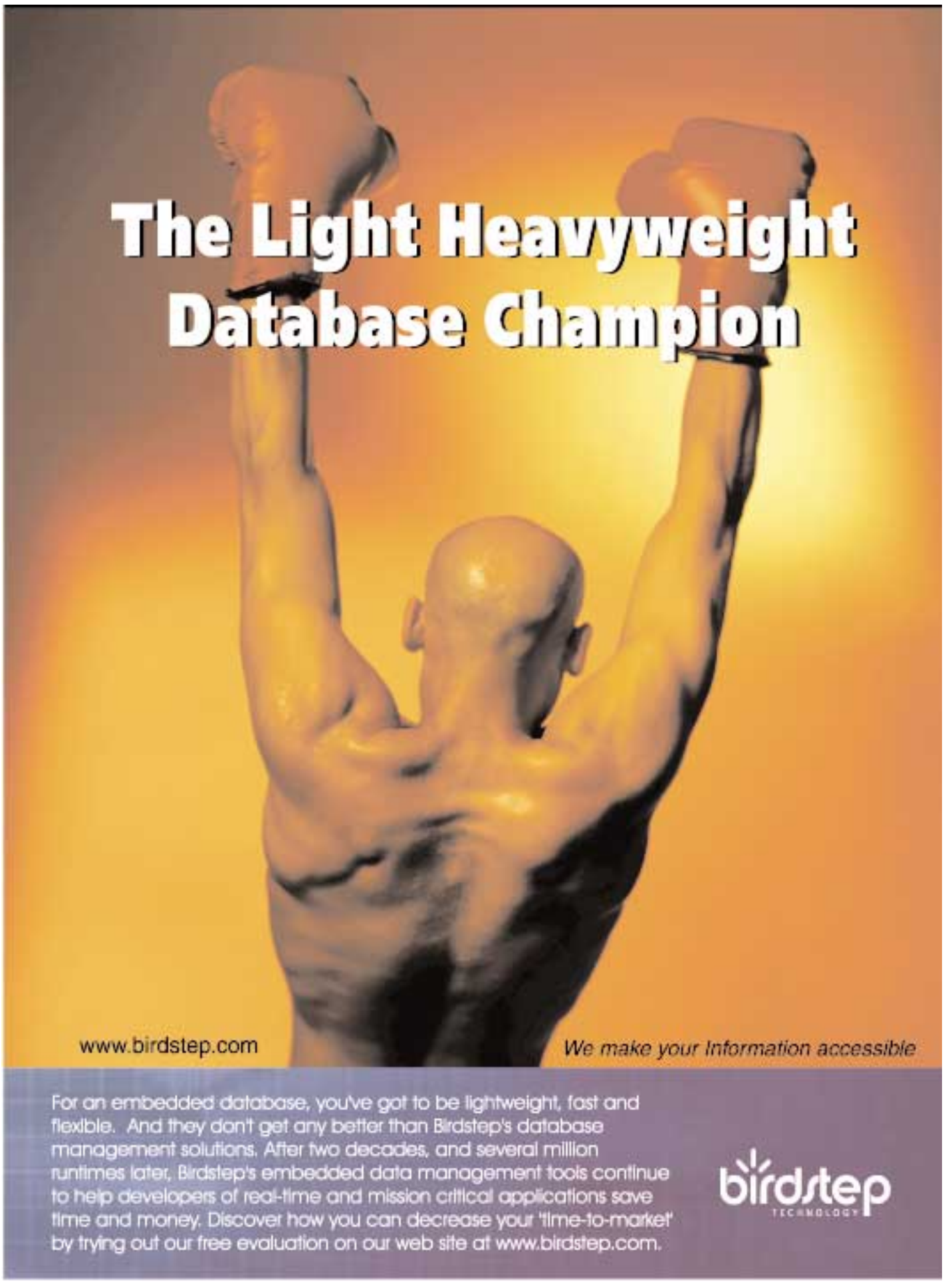
Embedded Systems Conference Heads to O'Hare

BY ALAN ZEICHICK

Forget about downtown Chicago: CMP Media LLC's Embedded Systems Conference is leaving its traditional home and relocating to the Donald E. Stephens Convention Center, in Rosemont, Ill. Much closer to O'Hare International Airport than to the downtown hotels, the new suburban location should be more convenient to attendees and exhibitors, according to the show organizers.

This year's event, with sessions from Monday, June 3, through Thursday, June 6, will have more than 90 classes, along with nine full-day tutorials ranging from DSPs and TCP/IP, to C++ and UML. New classes for this event cover Java, the .NET Compact Framework, Extreme Programming, developing for handheld devices, cost estimation, block I/O drivers and other key topics.

A keynote presentation, scheduled for Tuesday at noon, will be given by Nick Tredennick, original microcode developer for the Motorola 68000 microprocessor, and currently the editor of Dynamic Silicon magazine. Tredennick will discuss the embedded market's evolution. ▮



EmbeddedSystems Conference Chicago

CONFERENCE:
June 3–6
Donald E. Stephens Convention Center
Rosemont, Ill.

CONFERENCE HOURS:
Monday, 9:30 a.m.–5:30 p.m.
Tuesday, 7:30 a.m.–4:30 p.m.
Wednesday, 7:30 a.m.–4:30 p.m.
Thursday, 7:30 a.m.–4:30 p.m.

EXHIBIT HOURS:
Tuesday, 2 p.m.–7 p.m.
Wednesday, 11 a.m.–5 p.m.

KEYNOTES:
Tuesday, Noon–1 p.m., "The Evolution of Digital Design," Nick Tredennick

www.esconline.com/chicago

Empress Offers Database Access Using C APIs

BY ALAN ZEICHICK

Why use SQL or ODBC/JDBC when you can access an embedded data store directly via C API calls? That's the mantra of Empress Software Inc., which has released Embedded Real-Time Toolkit as an add-in to its Empress RDBMS.

According to the company, the toolkit directly implements a number of abstract data types in the Empress RDBMS using more than 200 C API calls, including arrays, circular buffers, queues, stacks and tables, and lets developers leverage record numbers, time stamps, unique keys and serial numbers.

"SQL and ODBC don't cut it for maximum performance and efficiency," claimed Ivor Ladd, vice president of technology at Empress (www.empress.com), in a statement. The toolkit is delivered as source code, and is priced at $2,599 per developer seat for companies that have already licensed the Empress RDBMS, or $2,999 including the database license. The company states that the database runs on Linux, Unix and Windows, as well as Lynx OS, QNX and several other embedded operating systems. ▮

TI's Wireless Hand: Pair of New Kits

BY EDWARD J. CORREIA

Texas Instruments Inc. at the end of April released the latest in a series of hardware and software development kits for boards based on its C5000 low-power digital signal processors. The new kit, cleverly named the TMS320C5416 DSP Starter Kit, includes host-to-target communications over USB, which TI says improves code download and debugging performance.

The kit (www.dspvillage.ti.com/c5416dsk4) comes with TI's C5416 DSK development board, encompassing a 16/20-bit stereo codec, four audio I/O jacks and embedded JTAG emulation via USB, and is designed to target a multitude of speech-enabled applications, such as speech-to-text conversion, according to the company. Priced at $395, the kit also includes a version of Code Composer Studio 2.1 C/C++ integrated development environment for Windows development hosts, TI's DSP/BIOS real-time kernel, and error recovery target software and diagnostics tools.

The company also is working toward a September release of the Innovator Development Kit (www.ti.com/sc/rd/innovator), a set of hardware and software tools designed to simplify development of handheld and wireless computing applications that encompass its OMAP processor running Linux, Palm OS, Symbian OS or Windows CE. The basic kit reportedly will include an iPAQ-style handheld computer with OMAP 1510 processor, 16MB RAM and Flash, a touch-sensitive color LCD display, stereo speakers and I/O, and interfaces for USB, IrDA and RS-232. A deluxe version will include an enclosure for the handheld unit that adds Ethernet and PS/2 ports for keyboard and mouse, plus a battery and charger. Optional expansion modules will be available for GSM/GPRS, 802.11b and Bluetooth. ▮

BIRDSTEP FLIES INTO MIRRORING

BY EDWARD J. CORREIA

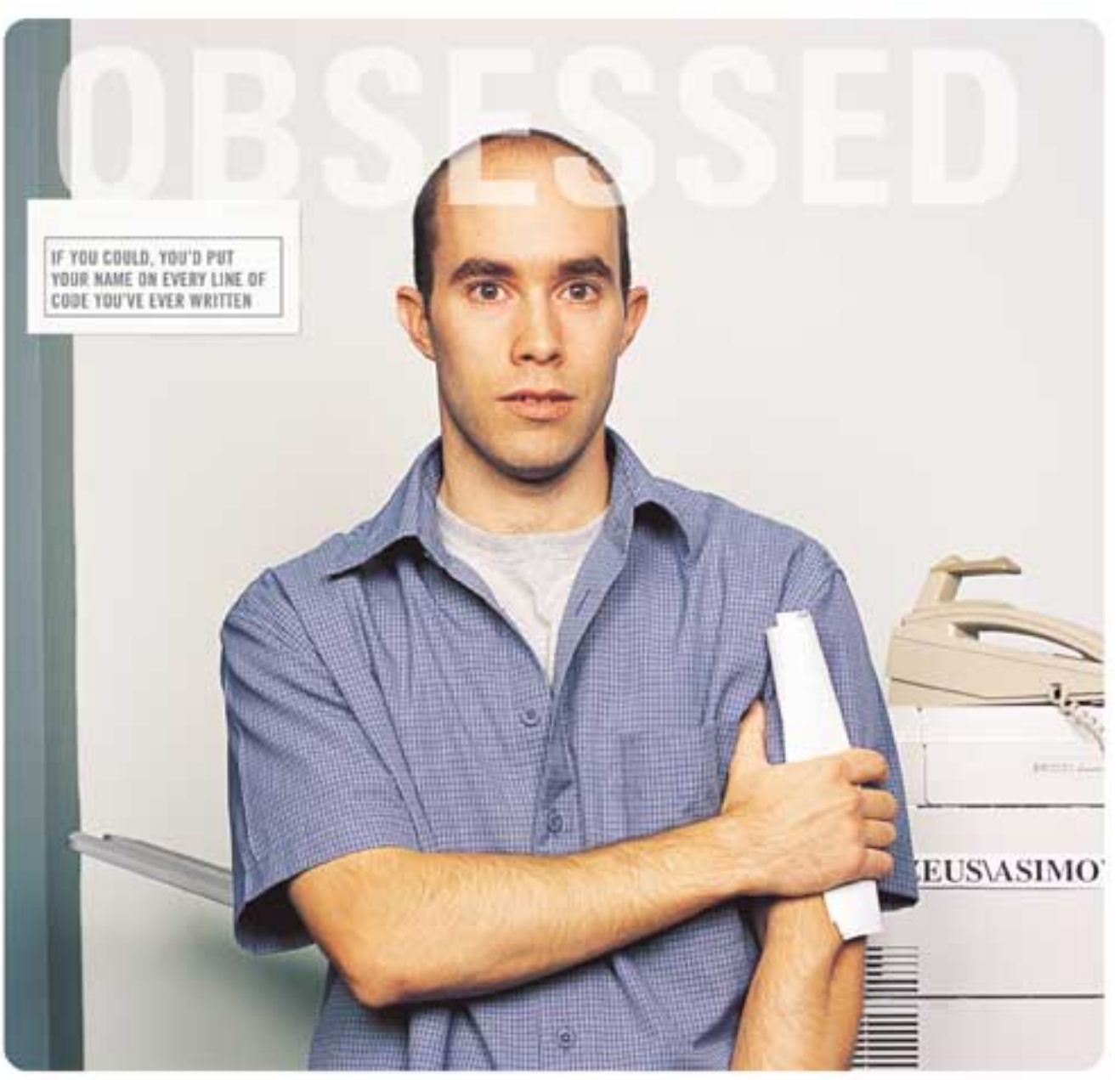
Embedded database developer Birdstep Technology has released RDM Embedded 6.0, the latest version of its small-footprint database engine that the company says now includes mirroring, a SQL interface and simplified reentrancy.

The company (www.birdstep.com) says mirroring capabilities allow fault-tolerant systems by way of a mirrored database copy, with automatic rollover to the backup if the primary database fails. Database migration can be synchronous or asynchronous.

Also new is an ODBC 3.5-compliant SQL API, replacing dbQuery. In addition, Birdstep has simplified reentrancy functions, which are implemented as a single set of API calls for single-tasking and multitasking. Reentrancy is a library function characteristic that allows multiple processes to use the same address space while keeping the values for each process constant between calls.

The API also includes a set of mappings to the old API calls to ensure compatibility of legacy code, the company says.

RDM Embedded 6.0 requires about 225KB of device memory, depending on the host operating system, and supports Linux, QNX, Unix and Windows. ▮



BREW, Java and Symbian: Calling All Apps

Strategies for enabling enterprise applications over cellular phones

BY EDWARD J. CORREIA

Your CEO has just dropped a bomb. You have six months to make your company's customer relationship management application available to all of the company's salespeople from anywhere in their territories. But here's the kicker: You have to do it without buying any new hardware. What will you do? Although many organizations are placing handheld computers at the heart of their wireless strategy, an option worth exploring is the intelligent cellular telephone, equipped with an application stack such as Qualcomm's BREW, Sun's Java or Symbian's OS, a trio of contenders vying for market acceptance.

While there certainly are other niche players available or soon to be, including mobile phones based on Palm's Palm OS, RIM's Blackberry and Microsoft's ever-forthcoming "Stinger" Windows CE-based operating system, many developers may choose to focus on the broader devices and platforms. "If you want to enable the bulk of your mobile work force with enterprise apps, you have to think cell phones," said Jeremy James, senior director of marketing at mobile-phone pioneer Qualcomm Inc. (www.qualcomm.com), which develops and markets BREW, the Binary Runtime Environment for Wireless. James said BREW, which is used extensively in Korea, has been deployed in several other pockets around the world and will soon be offered across the U.S. by Verizon.

James claimed that Qualcomm is the only single-vendor cell phone application vendor. "[With other vendors,] you have to piece together your own system. You get the development environment from here, the provisioning system from there and the carrier from another place. With BREW, we offer not just the environment, but the wireless downloading system from the developer's computer all the way to the end-user download server."

James said developers use the free BREW tools to build small executable modules that enable mobile users to have "focused utility, and to deploy the most important aspects of their current desktop applications in a wireless app." He said developers going wireless need to begin thinking about what views of the information will be most useful for a particular user. "You might have a salesman [and] service tech who are generally sharing a single data store, but are interested in different elements of the information. What would be most useful to them when they are mobile? And what would be practical given the memory, processing and UI constraints of a cell phone? The idea of shrinking Oracle down to fit on a handset is probably the wrong way to think about this," he said.

Of course, some organizations may find a single-vendor strategy like BREW to be dangerous, preferring to have more of a choice. While, ultimately, Java technology comes from Sun Microsystems Inc., many manufacturers build Java 2 Micro Edition-based handsets. Indeed, Sun has recently directed considerable resources at giving developers a place to start.

In April the company launched wireless.java.sun.com, a portal dedicated to wireless Java development. Maryann Rayner, the site's editor, said that among the major challenges is keeping up to date on dimensions and capacities of the variety of wireless devices that might be out there; Sun says there are currently 65 Java-enabled phones using 11 wireless communications technologies.

"It's one thing to know the sizes; it's another to implement [applications to them]," she said. Because in addition to variations in processor power, RAM and screen size, some programming concerns are carrier-specific. "About 75 to 80 percent of your code you write once," she said. "Then when you go on a specific phone or carrier, you pay attention to different things. When a device is coupled with a back-end server, as with end-to-end implementations, you've got security, threads, sessions and data-synchronization concerns."

Paul Pangaro, Sun's senior director of developer Web services, admitted that Java can't solve all the problems a wireless developer will face. Among them is deployment, which is still in the hands of carriers, phone manufacturers and other third parties such as portal providers. "We address the issue on the site," he said, "but that will continue to develop as carriers become more capable of helping developers get stuff to end users."

Presenting a third option is the Symbian OS, which offers both a native development environment and a JVM. Developed by Symbian Ltd. (www.symbian.com), a consortium of cell phone manufacturers that includes Motorola, Nokia, Panasonic and Sony/Ericsson, Symbian OS offers developers a choice among Java, C++ and Visual Basic, with tools available from Borland, Metrowerks and AppForge.

Paul Cockerton, Symbian's head of communications, said developers' primary concern when seeking to mobilize enterprise apps should be availability of phones that will run their code. "For a

developer, one of the things you want to know about is, 'Are there going to be devices out there?' More than 70 percent of the mobile industry has already started developing Symbian OS phones. The question [becomes], do they want to write in Java, C++ or Visual Basic?"

Symbian OS also gives developers an operating system that Cockerton said is consistent from one phone vendor to another, with source code available. "It's the same Symbian OS that goes into each phone; 80 percent of [native application] code will be the same," Cockerton asserted, adding that the only differences will be hardware-specific. "The developer will need to optimize for a particular phone, and take into account what buttons the phone has, the size of the screen and each phone's interface."

For Java apps, Symbian relies on carriers and Web portals for deployment over the air. For native apps, Cockerton said there are other options. "It's still [in a] fairly early stage as yet, but apps can be put on the phone [prior to] production, for instance by Nokia, or they can be included in the platform, as we've done with the Opera Web browser." As for enterprise applications, testing requirements vary by carrier, he said, and most will want to perform some.

Qualcomm's James said that his company also relies on carriers for enterprise application deployment. "The BREW-enabled handset touches the application download server inside the carrier's network and the carrier acts as the retailer of the app." But James drew a clear distinction between Java apps, which run through a JVM and can be downloaded wirelessly, and native apps of the BREW environment, which are controlled.

"In our experience, carriers are not too keen on things going on phones that they don't know about. Part of our security model is that the BREW Distribution System does not allow the anonymous downloading of apps. Java apps are 'sandboxed,' so theoretically they can't crash the phone or the network. But by the same token, there is a limit to their functionality. The ability to reach deeply into the phone makes apps more powerful. BREW apps can do a lot because they can integrate with core phone functionality. The phone and the network are protected because apps are tested and only distributed via wireless download from the carrier."

Cockerton claimed that the Symbian OS includes safeguards against errant native code. "Because of the rigorous architecture of the Symbian OS, we take care to make sure things don't crash. And we manage all the interrupts of a particular application so you can run and take calls and manage different processes all at the same time."

But Cockerton added that another competitive advantage for Java developers writing to Symbian's JVM over those atop proprietary operating systems is that it might save them from having to write any native code. "Symbian has been working closely with Sun on its JavaPhone [API], which permits Java applications to call a phone's native APIs" and directly access the device's hardware functions, such as dialing and sending messages. "When Java is written to a proprietary OS, that's more difficult." Some carriers, including SprintPCS, have developed their own extensions to J2ME, enabling direct hardware access on particular devices.

But Qualcomm's James contended that BREW is superior due to its ability to operate in more constrained hardware environments than the so-called smartphones needed to run Java. "What enterprise wants to have a smartphone as a primary pillar of its mobile strategy? If you can begin by provisioning appropriately designed apps on cell phones, then you're able to touch all of your mobile users. The fact that some will already have smartphones means some will be able to do more." ■

SALT Forum: Talk To Your Web Services

Tagging scheme to speech-enable apps

BY EDWARD J. CORREIA

If the SALT Forum sticks to its published schedule, there will be another way of mobilizing enterprise applications available this year, provided the apps are deployed as Web services.

SALT tagging leverages existing Web services, says Microsoft's Mastan.

The Speech Application Language Tags Forum, a diverse industry consortium, last year set out to develop a royalty-free way of expanding existing markup languages to provide spoken access to Web content. In March the group released SALT 0.9, a draft version of its tagging specifications, and announced its intention to submit the specs to a standards body that has yet to be selected.

James Mastan, group product manager of .NET speech products at SALT member Microsoft Corp. and chairman of the SALT (www.saltforum.org) marketing working group, described one of SALT's many possible applications as a replacement for interactive voice response (IVR) systems common today. "Rather than hearing 'press 1 for this, press 2 for that,' and hearing responses spoken back, you could speak into a PDA and get visual output, like a list of available flights."

Mastan explained that SALT works by extending existing markup languages such as XML, HTML or XHTML. "It adds a few lightweight, speech-related tags so that all a developer has to do is add those tags and some scripts to their existing Web application, recompile it, and it's speech-enabled," he claimed.

In addition to the developers' tools (an extension to VisualStudio .NET was scheduled for beta release on May 7), there are two major components to make SALT work. A server speech recognition engine (such as those from SALT members Philips and SpeechWorks), a telephony server and the client software, which Mastan said for a PC is a speech-enabled visual browser (an IE extension was scheduled for release on May 7).

Mastan explained that the telephony server handles incoming calls and PBX connections, and runs a SALT-based voice browser. When a call comes into the server, a telephony browser would kick in "as a proxy to speech-only clients," he said. The browser parses the incoming words and hands them to the speech

► continued on page 20

How Your Applications Can Earn Their Stripes

AirClic links enterprise apps to bar codes

BY EDWARD J. CORREIA

If the devices in your organization don't run BREW, Java or Symbian, or if the carriers offering those capabilities don't provide adequate coverage on their networks, there's another alternative for mobilizing data-driven applications.

You can launch apps from any phone, says AirClic's Gupta.

Virginia-based mobile developer AirClic Inc. (www.airclic.com) offers a unique solution that permits developers to create links between bar codes in the field and their back-end data. Developers can use the system to let field workers input codes using a remote scanner or phone keypad to bring up data or launch as many as three other services or applications.

Suren Gupta, AirClic's executive vice president of operations and information services, described an application developed by the Boston public schools that uses AirClic to help police officers determine where truant students are supposed to be. "They have a cell phone, and I provide them with a scanner and software components that can interface with our platform," he said. Once the student's code is scanned, the system queries the school's central database and sends back the student's class location. Gupta said the alternative requires officers to parse through an out-of-date printed report containing upward of 65,000 names.

According to Gupta, the system can work with any telephone, including land-line and mobile phones and Java-, WAP- and SMS-enabled phones. AirClic also markets stand-alone scanners, scanner-enabled phones and a key-fob-like device that can scan and store about a hundred codes, and later upload them to a Windows PC via USB or serial interface for processing.

► continued on page 20

SALT

◂ continued from page 19

recognition engine, which follows rules based on those words.

Because it leverages existing Web services, SALT minimizes the amount of extra coding necessary to voice-enable those services, Mastan said. "The application is [already] running in their environment; they don't need to add black boxes to run proprietary voice-only applications. And on the development side, SALT is architected as an object-oriented, event-driven programming model, so that Web developers will understand how to do it."

Mastan said SALT is similar in concept to VoiceXML. "There was a bunch of companies [developing] proprietary [IVR] platforms that got together to develop a standard for them to talk to each other and interchange data. VoiceXML was born to accommodate simple IVR telephony applications. What it did not contemplate was the Web, multimodal applications, graphical devices and interacting with visual and speech together. That's where SALT came in," he explained.

"We consider [speech] to be the most natural form of user interface available," Mastan continued. "And it's the only interface common to all devices. Others, such as pen-based point-and-click and soft keyboards aren't. The industry is now starting to go from touch-tone menus to speech-in, speech-out only applications," he said, with convergence of speech with devices as the next logical step. ▮

STRIPES

◂ continued from page 19

The AirClic system consists of three main parts, the first of which Gupta said handles code management. "We call it a code profile, but you can think of it as a high-speed switch that triggers a certain application," he said, adding that a user's profile can determine which applications are triggered. AirClic stores code catalogs for all its customers on its own servers. These contain lists of all known codes for any company using the software, each of which can be linked to as many as three applications.

Gupta described another example involving a pharmaceutical company linking its medication codes to product information for doctors, another for patients, and perhaps a third for sales representatives logging orders.

User profiles also can be linked to locale. "If a user is in Japan, he receives Japanese content," which is processed and formatted in XHTML for the client that requested it. This is performed by the rendering engine, the second major component. "The beauty of the system is that they can get the same information on a phone, PC or PDA," he said, adding that if the target device is Java-enabled, it can be programmed to both store data and perform preprocessing prior to sending a code, cutting download time. Gupta said the third major component is the development tools, which include a set of Java APIs for processing, managing and administering scanned data and related services, and for monitoring events and usage.

One significant downside to this solution is that it forces customers to rely on the solvency of AirClic for a major portion of their application. To this, Gupta said: "We offer stability that can compete with the best out there in terms of the viability of our business." AirClic was established in 1999 and has 85 licensees, but has yet to show a profit, Gupta said. Pricing varies by user and traffic volume. ▮

Empower

...with Outside In
Document Conversion
and Viewing Technologies

Empower your mobile, desktop and server applications to view, access or convert more than 225 file formats on multiple platforms with Outside In Technology.

More than 350 development organizations worldwide trust Outside In to bring the power of information to their products.

Attend a free webinar,

register at www.stellent.com/oidemo or call toll free 866.604.8372

OUTSIDE IN®
A STELLENT PRODUCT

Viewer Technology | Content Access | Wireless Export | HTML Export | XML Export

EDITORIALS

More Than 'Phone Home'

Wireless, wireless, wireless—to software development managers, it must seem that nearly every platform vendor has gone crazy for wireless client support. From the .NET Compact Framework to Java 2 Micro Edition, from Palm to RIM, handheld devices are all the rage in product literature, trade shows and positioning.

But let's get two things straight. First, few enterprises truly have a mission-critical need to support small-footprint wireless devices. Although one could concoct many hypothetical "wouldn't it be nice if…" sort of scenarios, there really are few cases where there's a compelling business need to broadly support mobile executives, employees or customers. To a large extent, wireless adoption (beyond WiFi-equipped laptops) is being driven by the vendor and carrier community, not by enterprise need.

Second, although large-format handheld devices such as the RIM Blackberry, Sharp Zaurus, Compaq iPaq (or is it the HP iPaq?) and Palm i705 are sleek, sexy and fun to play with, the truly ubiquitous platform is the cellular telephone.

Granted, most handsets available today lack the capability to locally execute downloaded applications. Yet, as the installed base of BREW, Java, Symbian and other turbo-charged phones into the mass market inexorably increases, the cell phone will likely be most organizations' first, best wireless development target platform, especially for customer access. For internal use, many companies may find the cell phone to be an affordable, easy-to-support platform, except in situations where larger screens and faster processors are a necessity. So, while pundits rave about the latest handheld computer, be sure not to leave the cell phone out of your wireless equation.

And Source Code for All

The Apache Software Foundation may not be a household name, but its products—and source code—are front and center of modern-day enterprise software. In many cases, developers are downloading its free Web server, Java servlet engine or other applications directly for business use. In other cases, leading platform vendors are embedding Apache code inside their own commercial offerings. All that is backed by a hard-core team of volunteers, arguably second only to the Linux community in their broad influence on enterprise computing. Indeed, with the obvious exception of the Microsoft ecosystem, it's hard to find a part of the server-side development mainstream that isn't influenced by Apache. And even there, many Windows shops use pieces of Apache code, particularly its Web server.

Why is Apache so successful? Because its team is practical. The Apache license provides open-source enthusiasts and contributors with safeguards to their intellectual property, while encouraging widespread adoption by powerhouses like IBM and Sun. Apache's pragmatic approach to open-source issues, combined with the obvious technical excellence of its offerings, has given it moral authority to negotiate with vendor consortiums like the Java Community Process. Although it's staffed by volunteers, and gives its source code away with few strings attached, the Apache Software Foundation is one of the most important influencers in the software development community today. ▮

GUEST VIEW

AN ENTERPRISE ARCHITECTURE VOCABULARY

Following a speech at an industry conference on the subject of modeling and .NET, a fairly young programmer approached me to talk about how enterprise architecture fits into the .NET project he was working on. Enterprise architecture is really helping us see how our class libraries relate to each other.

JAN POPKIN

I couldn't respond. Why? The programmer and I didn't share the same vocabulary or perspective. We lacked a common foundation to talk about enterprise architecture.

As I thought more about this, I realized that if I had asked nine other people attending this speech to define enterprise architecture, I would have gotten nine different answers. Object-oriented developers would talk about how enterprise architectures can horizontally link class libraries. Another programmer might define it as code construction. A software architect would describe blueprints for their existing IT data and systems. Enterprise architects would delve into areas such as business goals, corporate metadata, relational databases or Web services.

These definitions illustrate that people define enterprise architecture through the narrow context of their job, not from the enterprise level. Thus, they lack a key element of enterprise architecture: how information technology supports the business goals and mission.

Enterprise architecture is a blueprint that captures the current or future IT infrastructure as it relates to business goals and processes. In short, enterprise architecture helps bridge the chasm that separates business and IT in an enterprise.

Why should we care how enterprise architecture is defined? Because without a shared understanding of enterprise software terms like this one, software professionals are missing the benefits of sharing best practices.

Without agreement across the industry about the definitions of words such as enterprise or architecture, it's harder to communicate, collaborate and learn from each other. How can we leverage our common knowledge when we don't share a basic foundation of vocabulary? How can we choose the best development tools when we aren't taking an enterprise view? And without the right tools to do the job, we are missing a huge opportunity to work smarter.

Let me use an analogy: Suppose we were going to build a house. We would hire an architect to design a blueprint, then review and approve the blueprint. We would hire a general contractor and subcontractors (plumbers, electricians, etc.) and give them the plan so they could see how each part fits into the whole. We would make sure it is designed to meet our daily needs as a family. We'd approve a schedule and budget. As changes unexpectedly arose, we could use the blueprint to figure out what went wrong and fix it.

More important, we could see the big picture—how all the pieces come together to build a house.

Why doesn't the same hold true for technology? Companies are willing to spend millions on systems and applications, often without a blueprint of how they fit into the enterprise IT infrastructure or relate to corporate goals. Without an enterprisewide blueprint for shared discussion, how can we truly understand how individual projects fit together and ultimately benefit the company and its goals?

On the developer side, a lack of agreement over an enterprise architecture hinders our ability to develop best practices. If we understand the differences between enterprise architecture and class libraries, we can better communicate with our colleagues.

We can discuss our business goals and what technology is needed to meet those goals. We can identify and evaluate tools that will help us develop the technology to fulfill the goals. By selecting the right development tools, we can better leverage our resources.

We can better understand the impact of changes in business process on our technology infrastructure. This drives the establishment of best practices within the company and throughout the industry.

The emergence of Web services further highlights the importance of understanding enterprise architecture. Distributed systems are now becoming more widely adopted. Web services are potentially more complex systems than anything else we have designed in the past 20 years. Technology blueprints at the enterprise level can tie Web services to business goals and play a key role in helping companies harness Web services complexity and maximize its value. Yet how many CIOs and managers are discussing architecture as part of their Web services development process?

A LESSON FROM UNCLE SAM

We could learn from the federal government. CIOs at federal agencies are adopting enterprise architecture as the first step in their technology efforts, and are seeing firsthand the importance of an enterprise architecture as a way to understand their current complex IT processes and infrastructure and define a road map to their future.

Because they are derived from business requirements, IT developers can build stronger, faster and value-producing systems that help the agency truly tie technology to business goals and eliminate system redundancies and foster information sharing and collaboration between departments and agencies.

We must do the same on the corporate side. We should seek ways to share and leverage our common knowledge, starting with a common vocabulary for enterprise architecture.

Only when we have achieved an industrywide shared development process, like the construction industry with its metrics and benchmarks such as blueprints and building codes, will we be able to develop technology that is more efficient, effective and requires less rework. Let's work together to take the first step and define enterprise architecture so we can all understand its value. ▮

Jan Popkin is founder and CEO of Popkin Software.

LETTERS TO THE EDITOR

COMPONENT MARKET ALIVE

Your special report ["Component Reuse: Does Anybody Get It?" April 15, page 16, or at www.sdtimes.com/news/052/special1.htm] was good, but I think you should be a little more careful when you check your sources next time.

I don't know where [Rational Software Corp.'s] Alan Brown got his facts, but he is way off the mark when he says that the commercial component market is largely owned by ComponentSource and Flashline Inc.: "They're the only two major companies making significant money; it's a hard area to make money in, and a lot of companies have gone under."

As the founder and CEO of a 7-year-old pure-component company (and seven years in our business means quite old), I can tell you that nothing is further from the truth.

First of all, both these companies are just resellers of components, and while ComponentSource does a rather significant amount of business for us and others, Flashline is largely irrelevant.

Second (and I can't believe you missed this), any relevant component vendor will tell you that most of the component reselling in the U.S. is done by Xtras, a pure-component reseller with the leading component catalog in the U.S. (VBxtras), and Programmer's Paradise, a public company that sells components and other developer software. A quick look in their 10Ks will probably give you better information than the speculation that you got from Mr. Brown.

And third, yes, it's a hard area to make money in, but we have managed to grow more than 50 percent per year for seven years running.

Gent Hito
President and CEO
N Software Inc.

I was disappointed after reading "Component Reuse: Does Anybody Get It?" The central themes were: 1) few developers are reusing components, 2) few commercial components are available, 3) few components are general enough, and 4) few component vendors are making any money. Based on my experience as founder and CEO of Xtras, a component marketplace for Microsoft-centric developers, I believe nothing could be further from the truth.

Rational's Alan Brown's statement—"[ComponentSource and Flashline are] the only two major companies making significant money"—was flawed. Xtras is making significant money, and based on our competitive research, I would speculate Xtras' revenues are on par with or greater than each of these companies.

Next, I object to the notion, asserted by John Parker of Kinetic Information, that the component supply is lacking. Those same 250-plus vendors offer a diverse set of components: user interface, reporting, charting, document imaging, medical imaging, compression, encryption, Internet protocols, database, PDF, OLAP and more.

Last, the logic in comments made by Greg Sherman of LogicLibrary was faulty. He asserts that enterprises' need to customize commercial components for their specific business logic is why "in-house development is fundamentally better." This assertion belies the fact that project managers are making build-versus-buy decisions and even when customization is required are choosing to buy $300-plus components instead of letting developers build lesser functional solutions costing upwards of $10,000. Clearly, enterprises should buy component functionality whenever viable; if not, every enterprise would also be developing operating systems and office productivity applications.

Mike Schinkel
CEO
Xtras Inc.

C++ WORK IN PROGRESS

Perhaps I'm missing something in Andrew Binstock's column ["Cross-Platform GUIs on the QT," April 15, page 29, or at www.sdtimes.com/cols/middlewatch_052.htm], particularly toward the last line, which says, "When you consider that Visual C++ and Visual Basic programmers will need to make substantial changes to run existing code on Microsoft's .NET, examining Qt might suddenly make a lot of sense."

Rather than go directly to the API set and attempt production-level application design, why not adopt a genuine RAD environment that is designed for cross-platform development?

I was a little surprised that in an article specifically focused on cross-platform development, there was no mention of Borland's cross-platform tool sets, which were introduced in January 2001. We found much the same opportunity in Qt as was mentioned in the article, prompting our investment in the company and arranging to use the Qt libraries as the foundation for CLX, the Component Library for Cross-Platform, which enables Delphi and Kylix to maintain a 100 percent code-compatible interface to the developer.

Originally we offered Kylix in a Delphi-language-only form, but we have recently announced that work is in progress to produce a C++ version that will integrate with our C++ Builder product for Windows, providing C++ developers a simple, effective means to address both platforms with a minimum of extra effort.

Particularly in the case of the Visual C++ and Visual Basic programmer, the Kylix/Delphi set comes in mighty handy. It offers a complete property-method-event programming model similar to the familiar environments found on Windows, and is entirely cross-platform code-compatible between Linux and Windows.

Thomas J. Theobald
Technical Marketing
Manager, RAD Tools
Borland Software Corp.

Andrew Binstock replies: I should have been clearer that the cross-platform capability I discuss is for mainstream languages, that is, languages supported by more than one vendor. Had I included languages like Borland's Object Pascal, I would have felt duty-bound to include Eiffel, which is more portable and enjoys a better object model, as well as other specialty languages that enjoy unique advantages over mainstream counterparts.

I am anxious to see Borland execute on the cross-platform strategy for C++ that you mention, and which was covered in the Feb. 15 edition of SD Times. Shipping that will provide an important cross-platform tool.

WEB SERVICES NIGHTMARE

Regarding your editorial "A Potential Nightmare" [April 1, page 26, or at www.sdtimes.com/opinions/opinion_051.htm], here is some feedback:

"...COM components. In most cases, these are few and far between." For a lot of application and corporate developers, relying on commercial binaries is a way of life. Even shops that roll their own components often rely on third-party controls and components. Often, these components have dependencies that branch down into lower-level components, or the OS itself. A user may install software at any time that could destabilize one of your components (a patch or OS upgrade, for example or rival software).

"...testers or developers can isolate and certify the binaries before incorporating them into an application." This doesn't seem to happen too often; the decision to buy usually implies a trade-off between time and money. Developers seem to choose tools that they've used in the past, or from vendors they trust. But they don't reverse-engineer them to make sure they're unbreakable. So what happens if a component breaks? The developer could work around the bug. Or look for a patch, or submit a case to the manufacturer and wait. Maybe buy a competitor's component. At any rate, you have to integrate and redeploy the component.

"Not only can't you see inside the Web service to see how it works, you can't even control its release cycle." This applies equally well to components. What if you've relied on a component that works well on one OS version, but all of your customers have upgraded? You don't have the source. What if the vendor changes the terms of your license? Web services are just like any third-party dependency: They require a strong relationship with your vendor. Trust, reputation and the terms of service spelled out, with all expectations and contingencies.

Donald Bleyl

Charlatans take advantage of stupid people and sometimes even dupe normally intelligent people. In the absence of malice, intelligent people will sometimes overlook details and make mistakes. Caveat emptor! Why should a Web service be any different than a hard good?

► continued on page 25

Letters to SD Times must include the writer's name, company affiliation and contact information. Letters become the property of BZ Media and may be edited. Send to feedback@bzmedia.com, or fax to 516-922-1822. Please mark all correspondence as Letters to the Editor.

SD Times SOFTWARE DEVELOPMENT
Software Development Times
May 15, 2002 – Issue No. 054

Publisher
Ted Bahr
516-922-2101 x101 • ted@bzmedia.com

Editor-in-Chief
Alan Zeichick
650-359-4763 • alan@bzmedia.com

Executive Editor
David Rubinstein
516-922-2101 x105 • drubinstein@bzmedia.com

Senior News Editor
Edward J. Correia
516-922-2101 x100 • ecorreia@bzmedia.com

Assistant News Editor
Christina M. Purpi
516-922-2101 x111 • cpurpi@bzmedia.com

Copy Chief
Patricia Sarica
516-922-2101 x106 • psarica@bzmedia.com

Art Director
Mara Leonardi
516-922-2101 x109 • mleonardi@bzmedia.com

Columnists
Andrew Binstock
abinstock@pacificdataworks.com
Wayne Rash
wrash@mindspring.com
Oliver Rist
orist@mindspring.com
Steven J. Vaughan-Nichols
sjvn@vna1.com

Contributing Writers
Alyson Behr
alyson@behrcomm.com
Jennifer deJong
jdejong@vermontel.net
Lisa Morgan
lisamorgan@mindspring.com

Advertising Sales Representatives
Southwest U.S.
Julie Fountain
831-476-1716 • jfountain@bzmedia.com
Northeast/North Central U.S./Canada
David Karp
516-922-5253 • dkarp@bzmedia.com
Northwest U.S./Canada
Paula F. Miller
925-831-3803 • pmiller@bzmedia.com
Southeast U.S./Europe
Jonathan Sawyer
603-924-4489 • jsawyer@bzmedia.com

Director of Circulation & Manufacturing
Rebecca Pappas
516-922-1818 • rpappas@bzmedia.com
Circulation Assistant
Phyllis Oakes
516-922-2287 • poakes@bzmedia.com
Office Manager/Marketing
Cathy Zimmermann
516-922-2101 x108 • czimmermann@bzmedia.com
Customer Service/Subscriptions
866-254-0110 • service@bzmedia.com

Bookkeeping Services
Ken Hafner • Kiwi Partners Inc.
khafner@kiwipartners.com

Article Reprints
Reprint Management Services
Renee Wywadis
717-399-1900 x172 • rwywadis@rmsreprints.com

BPA

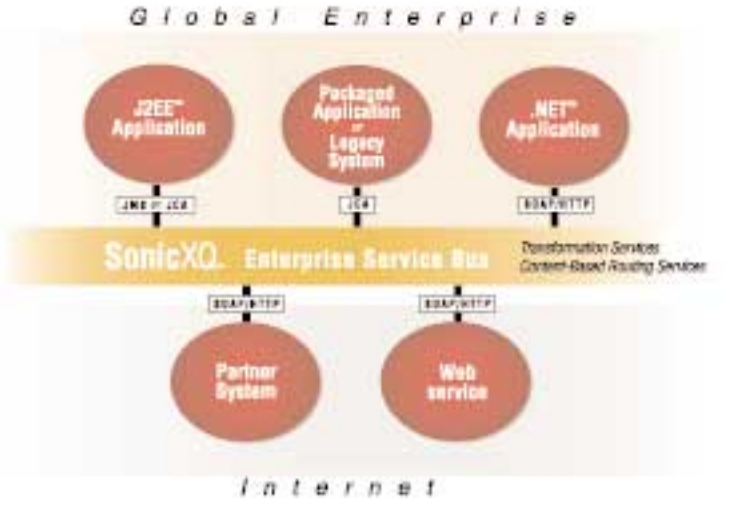
BZ Media
BZ Media LLC
2 East Main Street
Oyster Bay, NY 11771
516-922-2101 • fax 516-922-1822
www.bzmedia.com • info@bzmedia.com

President
Ted Bahr
Executive Vice President
Alan Zeichick

Everybody's focused on exposing applications as Web services while letting someone else figure out how to connect them. We're that someone else.

Introducing SonicXQ™

Integrate with ease, extend at will.™



Most companies are focused on exposing individual applications as Web services, but haven't yet considered how to effectively integrate or manage them. And that's no small task.

SonicXQ is the first product to deliver on the vision of the Enterprise Service Bus: a standards-based, service-oriented architecture that reliably and securely integrates enterprise applications through Web services and JCA technologies. SonicXQ includes configurable XML processing services that allow applications and business partners to easily interact over the SonicXQ bus, eliminating the need for point-to-point integrations and the expensive centralized solutions that implement them.

And because SonicXQ is built upon the proven SonicMQ® messaging backbone, it provides end-to-end reliability and comprehensive security between services. Our patent-pending Dynamic Routing Architecture™ ensures that Web services and distributed processes can scale to meet the demands of today's global enterprises.

Capitalize on the promise of Web services right now with SonicXQ. After all, what good is a Web service if it's an island unto itself?

sonic SOFTWARE™

www.SonicSoftware.com

© Copyright 2001 Sonic Software Corporation. All rights reserved. SonicMQ is a registered trademark and SonicXQ and Dynamic Routing Architecture are trademarks of Sonic Software Corporation in the U.S. and other countries. Java and all Java-based marks are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries. All other marks contained herein are the property of their respective owners.

INSTANT MESSAGING NOW ENTERPRISE TOOL

It was bound to happen. Every moderately new form of communication gets used by the fringe, the outlaws, the gadget aficionados, the wheeler dealers and finally business workers, in more or less that order. This progressive adoption long predates the advent of computers.

It is believed, sometimes averred, that the first book printed with movable type after Gutenberg's Bible was what passed for pornography in the 15th century. More recently, we know that the widespread acceptance of videotape was a result of pornography's early embrace of the technology, likewise many of those techniques used by sites that require you to acknowledge their ads when browsing. Although pornography has served my purpose here, the larger point is that communications technology has generally been accepted by business after previous adoption by consumers.

Instant messaging (IM) is the next technology to make this transition. Today, employees within corporations are beginning to use IM to perform standard business functions, such as quick communications to supplement workflow tools (or sometimes in lieu of them) and for project management or simply to get around the delays inherent in other forms of communication. Recently, for example, a group of eight Wall Street powerhouses (CS First Boston, Goldman Sachs, JP Morgan, Lehman Brothers, Merrill Lynch, Morgan Stanley, Salomon Smith Barney and UBS Warburg) implemented an IM system among their bond-trading divisions. In the system, traders, dealers and customers can all use IM for direct one-to-one communications. The goal is greater responsiveness to customers. The participating institutions view the added capability of direct customer communication as a competitive benefit that will distinguish them from other institutions that don't offer this level of responsiveness.

MIDDLEWARE WATCH

ANDREW BINSTOCK

Two months ago, the U.S. Navy announced an implementation of IM among allied ships in the Persian Gulf. Using Lotus Domino's Sametime IM product, sailors and officers on one ship can communicate back and forth in near real-time with those on another. Prior to this IM project, if a ship wanted to borrow supplies from a nearby allied ship, the request would have to go up the command chain on the sending ship and down the command chain on the receiving ship. A simple reply of "Yes, we have no bananas" would need to pass through a similar gantlet to be received. Since the Navy system—like the Wall Street system—has built-in automatic logging, encryption, a limitation on who can participate and a block on aliases, the need to vet every message before sending it is removed.

Today, consumer-side IM is a common thing. News coverage of the AOL-versus-Microsoft wars on the messaging standards has been fodder for the industry rags for much of the past year. IM, however, is now increasingly moving behind the firewall. Everyone in the company can use IM with colleagues in the same domain. This facilitates certain kinds of contacts: urgent ones and those too short for running through the e-mail systems. Urgent messages we all understand. Short texts, though, represent a factor that will likely determine how much IM corporations are willing to deploy and the rules for deployment. In pure e-mail systems today, the IM function is handled by e-mail. It shows up in those messages that consist entirely of a "thank you" or a smiley face or other single-word replies to previous messages. If these e-mails migrate to IM, they invite the next step: chatter. And here, IT managers and busy employees worry. If IM becomes a chatter port, then the mass of unimportant messages that overwhelm e-mail will hijack IM, destroying its benefits and turning it into another small way of ruining productivity. IM spam is a very logical extension of this.

However, if managers require that IM be limited to urgent messages or, let us say, customer contacts, then there is a high likelihood that it will become a useful even required tool in the enterprise. It will be the equivalent of e-mail with an "urgent and brief" stamp on it.

IM started as a grass-roots movement in 1996. Now it's an established way for consumers to communicate in chat rooms, cybercommunities and by phone. As people accustomed to IM enter more fully into the work force, they will bring IM with them—thereby accelerating the adoption adumbrated by the pilot projects discussed previously. If company policies can keep IM as a productive means of communication, then managers should expect in the next year or so to begin needing to accommodate this technology in their plans. Shortly thereafter, it will creep into programming requirements. Trust me. ▮

Andrew Binstock is the principal analyst at Pacific Data Works LLC.

LETTERS

◂ continued from page 23

As your article points out very nicely, the media is glossing over the negatives. But then, the technology is still maturing, so maybe this is not a flaw to be alarmed about because the final analysis will have taken care of this (the optimistic view). The value of good business analysis, technical design and code reviews should negate much of the worry that this article concerns. But herd mentality always seems to prevail, and there is never enough room in a schedule.

As I see it, the article's main point is actually part of a larger problem: How does an enterprise manage components? If you are developing components but not tracking these things, how can you expect to be successful using components outside of your control?

There's a much larger management issue looming and no one knows what to do about it. The solution will not be a tool that can be bought off a shelf somewhere, either.

Bruce MacDonald
Systems Architect
Scottsdale Insurance Co.

TESTING FOR THE WEB

Regarding your special report "Software Testing: The Internet Changes Everything" [April 1, page 22, or at www.sdtimes.com/news/051/special1.htm], you really tell it like it is. I'll bet some managers are already making moves to get some of this stuff off the ground.

Maybe the following questions will be fodder for another article, say a follow-up to this. What do these tools cost? Who has them? What do they do? What kind of training is available? And, who'll benefit from them?

Mark Gustafson

IF A STEAK IS WHAT YOU WANT...

Steven J. Vaughan-Nichols' column "Java Programming, Cajun Style" [April 1, page 31, or at www.sdtimes.com/cols/javawatch_051.htm] is amusing, especially the Microsoft spectacle.

You end with "Wouldn't you want to try an IDE and framework that could get higher-level work from your rank-and-file programmers? I would."

Well, I do not agree with that. You cannot make business, information frameworks or business dependencies easier than they are. If users (here, your programmers) don't understand the underlying business needs and vital operation logic of the client's industry, they will do "blind programming."

On the other hand, I do agree that a single, talented individual can eventually perform better with optimal tools and a comfortable working environment.

My point is that it is dangerous to assume a different tool could make a steak out of a sausage. If you think of a steak, get yourself a steak and not a sausage. It's the same with employees.

Max-Philipp Blickenstorfer

PR-Tracker™

Bug tracking doesn't have to be complicated!

PR-Tracker helps manage software development projects by tracking software bugs with problem reports. PR-Tracker records problem reports in a network database that supports simultaneous access by multiple users. Features classification, assignment, sorting, searching, reporting, access control, user permissions, attachments and email notification. Supports easy configuration of data collection and workflow on a project by project basis. Redundant data storage for speed and data corruption recovery.

PR-Tracker Web Client performs bug tracking over the internet or an intranet with the same easy-to-use Windows interface and features of PR-Tracker. Supports anonymous access, authentication control, and secure https protocol.

ProblemReport.asp enables customers to enter problem reports into a PR-Tracker database using a browser. A great way to implement beta test bug reporting or customer support. Customize this web page to collect the data you want and to match the look of your company website.

Download
www.prtracker.com
By Softwise Company

LARGEST GATHERING OF DEVELOPERS, PROGRAMMERS, AND *i*-TECHNOLOGY PROFESSIONALS IN THE WORLD!!

JUNE 24-27, 2002 • JACOB K. JAVITS CONVENTION CENTER • NEW YORK, NY

WIN A $35,000 LUXURY CAR!

ATTENDEES WILL BE INVITED TO TAKE A GOLF SWING TO WIN AND RIDE OFF IN A $35,000 LUXURY CAR!

Sponsored by webMethods

ACT NOW! SAVE $200!

EARLY BIRD REGISTRATION ENDS MAY 31st

GO TO... WWW.SYS-CON.COM

JAVA XML WEB SERVICES

Focus on Java

Java, now mainstream, is the dominant back-end technology upon which next-generation technologies are evolving.

Hear from the leading minds in Java how this essential technology offers robust solutions to *i*-technology professionals and senior IT/IS strategy decision-makers.

JAVA IN JUNE ESPECIALLY IN NEW YORK

JDJ EDGE conference & expo

Java Track: June 25-27

The Java Track, with something for every developer from beginner to advanced, will also look into the role that Java is playing in building up Web Services.

- JV1 Java Security Advanced Concepts
- JV2 Optimizing Database Performance in J2EE Applications
- JV3 Detecting, Diagnosing, and Overcoming the Five Most Common J2EE Application Performance Obstacles
- JV4 Building Asynchronous Applications Using Java Messaging
- JV5 Building "Smart Client" Applications using J2SE and J2ME
- JV6 .NET vs. J2EE
- JV7 Building Scalable Web Applications and Web Services
- JV8 Hot Breaking Session
- JV9 Java Tools for Extreme Programming
- JV10 Building Truly Portable J2EE Applications
- JV11 Security for J2EE Application Servers

Focus on XML

XML is today's essential technology to develop and deploy Web services. Here's your chance to learn from expert practitioners how XML is making the next phase of the Web a reality.

Focus on standards, interoperability, content management, and today's new quest for more efficient and cost-effective Internet and intranet-enabled business process integration.

XML NEXT G OF ENTERPRISE DEPLOYMENT

XML conference & expo

XML Track: June 25-27

The XML Track will focus on the various facets of XML technologies as they apply to solving business computing problems. This track targets audiences ranging from beginners to system architects and advanced developers.

- XM1 Data – a Key Part of Web Services
- XM2 OASIS Standards Update
- XM3 A Universal Business Language
- XM4 Achieving Standards-Based Mobile eBusiness Success With XML and Web Services
- XM5 Using XML for Rapid Application Development and Deployment with Web Services
- XM6 Open Up Your RDBMS with Open Standard Technologies
- XM7 XML Web Services: Standards Update
- XM8 Bringing XML to PKI
- XM9 Building a Corporate Information Model in XML
- XM10 XML in the Enterprise and Inter-Enterprise World
- XM11 XML and RDB Relationships

Focus on Web Services

Web Services, the next generation technology that will enable the Internet to work for you and your business, and finally provide that ROI you have been after, will be put under a microscope at Web Services Edge East 2002.

Information-packed sessions, exhibits, and tutorials will examine Web Services from every angle and will provide cutting-edge solutions and a glimpse at current and future implementations. Hear from the innovators and thought leaders in Web Services. Enjoy a highly interactive CEO Keynote panel that will debate and discuss the realities and promise of Web Services.

WEB SERVICES SKILLS, STRATEGY, AND VISION

web services conference & expo

Web Services Track: June 25-27

The Web Services Track will concentrate on the latest emerging standards. It will include discussions of .NET, Sun ONE, J2EE and App Servers, the role of UDDI, progress of the standards-making bodies, SOAP, and Business Process Management. It is intended for developers, architects, and IT management.

- WS1 Starting Out In Web Services: Fundamentals In Web Services
- WS2 State of the Web Services Industry
- WS3 Web Scripting Languages: Options for Dynamic Web Development
- WS4 Building a Web Services Application Infrastructure
- WS5 Deploying a Corporate Portal
- WS6 The Enterprise Service Bus: (ESB): Leveraging Web Services
- WS7 Developments in Web Services Standards
- WS8 Unlocking the Value of Enterprise Web Services
- WS9 Guarding the Castle: Security and Web Services
- WS10 Practical Experiences with Web Services and J2EE
- WS11 Designing Web Services Using UML

.NET TRACK: June 25-27

Combining technology, platform, and architecture, the .NET track provides insight on the latest developments for the Windows platform.

- NT1 Configuring .NET for Security, Performance, and Reliability
- NT2 Changing your environment to .NET
- NT3 Going Mobile with .NET
- NT4 .NET on Other Platforms (FreeBSD, MONO, Portable .NET)
- NT5 Inside the CLR
- NT6 Accessing Data From .NET
- NT7 Advanced .NET Web Services
- NT8 Migrating Legacy Code to .NET
- NT9 Advanced User Interfaces with GDI+

IT Strategy Track: June 25-27

The IT Strategy Track will focus on the managerial and design aspects of the various development disciplines. Topics will include Standards, Architecture, Design Patterns and Best Practices, Project Planning and Management, and Extreme Programming.

- IT1 Developing, Deploying and Managing Web Services
- IT2 Key Trends and Technologies for Building an Enterprise Web Services Architecture
- IT3 Selecting a Framework: Toolkit, Platform, or Roll Your Own?
- IT4 Getting Started with Web Services
- IT5 Overcoming the Web Services Barriers
- IT6 The Real Issue: Improving Your Enterprise with Enterprise Web Services
- IT7 Minimizing Risks and Maximizing Investments in J2EE Development Through the Use of Reusable Application Architecture and Frameworks
- IT8 Application Integration – Building a Flexible Web Services Architecture
- IT9 The Economics of Web Services
- IT10 Hooking It All Together – Application Integration Case Study

Who Should Attend...

- DEVELOPERS, PROGRAMMERS, ENGINEERS
- *i*-TECHNOLOGY PROFESSIONALS
- SENIOR BUSINESS MANAGEMENT
- SENIOR IT/IS MANAGEMENT /C LEVEL EXECUTIVES
- ANALYSTS, CONSULTANTS

WWW.SYS-CON.COM

Sun Microsystems at JDJEdge 2002: Java Fast Paths & Java University℠ Program at the Jacob K. Javits Convention Center, NYC

Java Fast Paths

Attend fast-paced, code-level, full-day Java technology developer training designed to prepare you with the skills to confidently approach the industry's core Java technology certification exams. Don't just say you know it… prove it!

Most developers recognize the expanding importance of gaining Java technology certification. If you're like those who've already taken the exams, the real hurdle to certification is finding time to prepare for the tests.

Java University℠

The Java University℠ Program complements this year's JDJEdge Conference by offering three aggressive, full-day, code-level training classes for experienced software developers, architects and engineers.

Attend code-level training in sessions designed by industry luminaries, and recognized experts. Sessions cover XML and Web services technology. Whether you're a beginning or a veteran developer, architect, or software engineer, you'll benefit from these value-packed full-day courses. Register now. Seating is limited.

Monday, June 24, 2002:

- Java™ 2 Platform: Developer Certification Fast Path
- Java™ 2 Platform: Architect Certification Fast Path
- Web Component Developer: Certification Fast Path

Tuesday, June 25, 2002
Developing Solutions Using Java™ Technology and XML

Wednesday, June 26, 2002
Web Services Programming Using Java™ Technology and XML

Thursday, June 27, 2002
Java™ APIs for Enterprise Web Services

PLATINUM SPONSOR: IONA END 2 ANYWHERE

GOLD SPONSORS: ADDS, bea, TogetherSoft

SILVER SPONSORS: Actional, SilverStream

CORPORATE SPONSORS: PolarLake, ALTOVA, Borland, PointBase, Altaworks, MERANT, webMethods

MEDIA SPONSORS:

Java Skyline, Webservices.org, XML, WIRE, XML TIMES.com, SAMS, JAVA, WebServices, XML, WebLogic, Federal Computer Week, wrox, SDTimes, WebSphere, wireless, IT Advisor, ColdFusion

JAVA AND JAVA-BASED MARKS ARE TRADEMARKS OR REGISTERED TRADEMARKS OF SUN MICROSYSTEMS, INC. IN THE UNITED STATES AND OTHER COUNTRIES. SYS-CON PUBLICATIONS, INC. IS INDEPENDENT OF SUN MICROSYSTEMS, INC. ALL BRAND AND PRODUCT NAMES USED ON THESE PAGES ARE TRADE NAMES, SERVICE MARKS, OR TRADEMARKS OF THEIR RESPECTIVE COMPANIES.

KEYNOTE SPEAKERS

DON FERGUSON, Chief Architect, WebSphere, IBM
PATRICIA SEYBOLD, CEO, Patricia Seybold Group
PHILLIP MERRICK, Founder, webMethods
BARRY MORRIS, CEO, IONA
JEAN F. ABRAMATIC, Senior VP of R&D, ILOG
PATRICK GANNON, President & CEO, DASCS
ERIC RUDDER, Senior Vice President, Microsoft
RICK ROSS, President, Java Lobby
GREG O'CONNOR, President, Sonic Software
DAVID LITWACK, CEO, SilverStream Software
ED LYCKLAMA, CTO, Strikeiron
DAVE CHAPPELL, Vice President, Sonic Software

FOR EXHIBIT INFORMATION CONTACT: MICHAEL PESICK
135 CHESTNUT RIDGE RD. • MONTVALE, NJ 07645 • 201 802-3052
MICHAEL@SYS-CON.COM

OWNED AND PRODUCED BY SYS-CON EVENTS

WS-I: ANOTHER STANDARDS BATTLE BEGINS

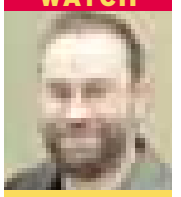
Just when we thought that Sun and IBM were going to make nice with each other ("Can't We Just Get Along?" May 1, page 35), it starts anew, over what kind of membership Sun should have in the Web Services Interoperability Organization (WS-I). And the villains of the piece? Microsoft and IBM.

Isn't it bad enough that despite all the Web services hyperbole, the simple truth is that all of the key Web services' protocols are drafts. I mean, what is SOAP anyway? I'll tell you what it is. It's a W3C draft. Let me repeat that: draft. Not final. Not finished. *Draft*.

WSDL? It's a W3C draft, too. UDDI? It's also a work in progress, except instead of having the W3C behind it, it's got a consortium of beefy companies working on it. And, they come right out and say on their site that they're not a standards organization. So what does that make UDDI? Chopped liver? It had better be a standard, or there will be lots of Web services interactions failing. And ebXML, it's got the United Nations and the Organization for the Advancement of Structured Information Standards (OASIS) supporting it. Who'd have thought it? The United Nations as a technology standards organization. What next? The Boy Scouts of America's BSAXML? Oh, and it's not finalized either.

Anyway, the point is not only are Web standards in a state of flux, they're also not being coordinated with one another even though they must work together if Web services are to get anywhere. Off the top of my head, I can't recall ever seeing such a confusing mess of standards being bound together in one major industry initiative before.

JAVA WATCH



STEVEN J. VAUGHAN-NICHOLS

Given all that, the WS-I sounds like a great idea. Someone has to make sense of it all, and who can argue with a mission statement like this one: "The organization's deliverables are targeted at providing resources for any Web services developer to create interoperable Web services, and verify that their results are compliant with both industry standards and WS-I recommended guidelines." And the group itself is an "open industry effort chartered to promote Web services interoperability across platforms, applications and programming languages."

That's too wordy, but the idea is good. Unfortunately, when IBM, Microsoft et al. had this party, they didn't invite Sun until the last 48 hours. In fact, as I write this, Sun's not even a member. Instead Sun and the WS-I (read IBM and Microsoft) are fussing over what role Sun can play in the WS-I.

Sun wants on the board. It feels it deserves it. And rightfully so. Sun has always been a big supporter of Web services, and, of course, is the owner of the Java specifications. IBM and Microsoft, on the other hand, want Sun to be involved with WS-I as a "contributor." Is that so bad? Well, Sun looks on this as being a second-class citizen, and I can't argue with that.

Just look at the other board members, Accenture, HP and SAP. Sure, they're important Web services supporters, but they're not even in the same league with Sun when it comes to shaping the technology. I mean, come on, .NET and J2EE-based servers will be the foundations of Web services, and if Microsoft is there with .NET, Sun should be there for J2EE.

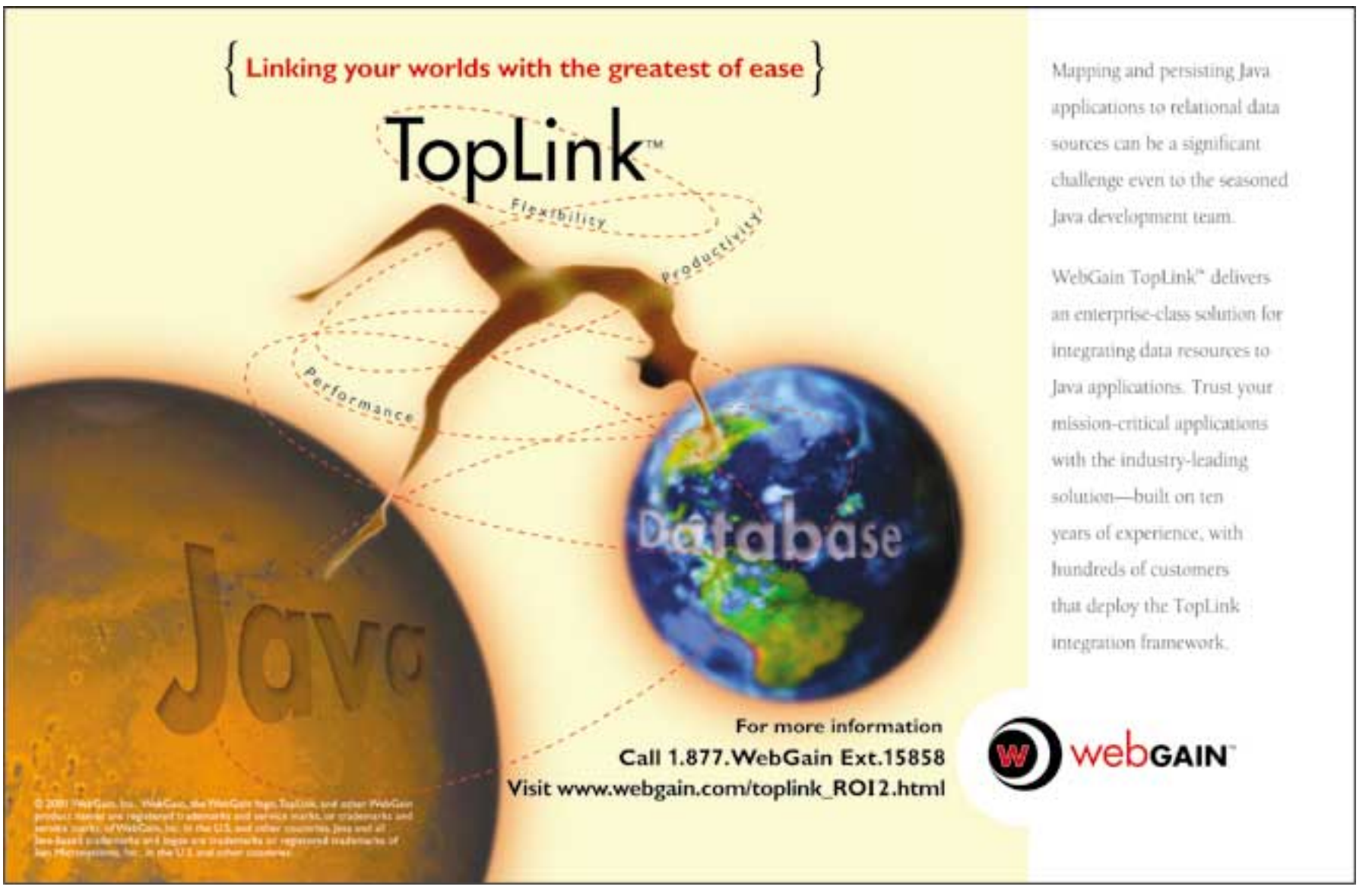
Some people are arguing that there's a grand conspiracy, led by IBM, to use the WS-I as a way to isolate Sun. Indeed, David Berlind of ZDNet argues that this is part of an IBM plan to first wrestle control of Java from Sun and even to eventually buy out Sun (http://techupdate.zdnet.com/techupdate/stories/main/0,14179,2860393,00.html).

Now, that sounds far-fetched to me. I'm sure some people might think that adding Java and the JCP, Solaris and SPARC processors to the IBM portfolio is just what Big Blue needs, but I can't see that being IBM's corporate strategy. I think it's far more likely that the Sun WS-I snub was a stupid mistake by a few misguided IBM executives—with Microsoft eagerly urging them on. Let's face it, anything bad for Sun and Java is going to be better for Microsoft and .NET than it is for IBM or anyone else.

For those of us who don't have massive stock holdings in any of these companies, what's really annoying here is that a political fight has all the hallmarks of turning into a standards war. Up until now, I've been impressed with how well everyone was cooperating over the wild and wooly mix of Web services standards.

It seemed too good to be true. I guess it was. If we do indeed have Web services standards wars, the whole concept is in deep trouble, and you can forget about the technology becoming a universal middleware play. It will be back to software development as usual. Darn it. ▮

Steven J. Vaughan-Nichols has been writing about technology for more than 15 years and also has worked as a programmer for NASA and the Dept. of Defense.



VSLive!™

Visual Studio Developer Conference

New York June 16-19, 2002

Register by
May 15, 2002
Save $200!

Use Priority Code: TIMES

800-848-5523
www.vslive.com/ny

Join the Leading Event for .NET Developers

VSLive! leads the industry with the foremost conference and exposition for developers building applications with Microsoft toolsets. Expect face-to-face interaction with the Microsoft Development Team and independent industry experts. Look forward to hands-on learning with vanguard add-on tool vendors and developers. Participate in probing discussions with your fellow programmers and coders on topics including:

- The .NET Framework
- Web App Development with C# and ASP.NET
- SQL Server 2000
- Data Access with ADO .NET
- Web Services
- SOAP
- Visual Basic .NET Advancements

Call today to save your spot!

www.vslive.com/ny 800-848-5523

Microsoft msdn FTP Fawcette Technical Publications Visual Studio Magazine

Microsoft, MS, MSDN, SQL Server, Visual Basic, Visual C++, C#, Visual Studio and Windows are registered trademarks of Microsoft Corporation. VSLive! and *Visual Studio Magazine* are trademarks of Fawcette Technical Publications, Inc. Visual Studio is used by Fawcette Technical Publications, Inc. under license from Microsoft. All other trademarks are property of their respective owners.

PHYSICALLY SECURE

Web development has always had its limits: limits to what you can deliver to a browser, limits to what you can expect for bandwidth, limits to the kind of information you dare transfer, limits to security.

Some of those limits may remain with us for some time. The last-mile constraints on bandwidth aren't going away any time soon, especially with telecom companies dropping like flies in a spray of Raid. Browser limits depend on Microsoft, which is a subject for another time. There also are limits to how safe the information you handle can be, but those turn out to be good limits.

As it happens, a series of new developments at the Los Alamos National Laboratory has produced encryption that cannot be cracked. Period. If you use the techniques developed by Dr. Richard Hughes and others in the physics division there, your information is protected by the very fabric of the universe. It cannot be cracked without violating the laws of physics.

To start things off, Hughes and his colleagues found a way to imprint information on subatomic particles. In this case, they're using photons. The way this information is imprinted is by fixing the polarization of an individual photon, so that (for example) vertical polarization would represent a binary 1, and horizontal polarization a 0. Photons also can be polarized diagonally, with diagonal opposites representing the 1 or 0 of a binary number.

Once encoded, these individual photons are transmitted to a receiver that reads the polarization, and from that, determines the information contained on the photon. Each photon carries one bit of information, so to read the information, you have to capture each photon in order and choose the right type of polarization. This alone makes transmission fairly secure. If you guess wrong on the proper polarization, you can't go back and check the other choices—this is prevented by the Heisenberg Uncertainty Principle.

Worse, because each bit is carried on only one photon, you have to know where to find each one, in order. Even if you manage to find them, you then have the problem of reading them without the receiving station knowing about it. After all, if you intercept the one photon carrying a bit of information, that bit stops there. The information doesn't get to the intended receiver at all. You could, of course, retransmit the photon, but even there comes a problem.

You see, Heisenberg's principle also says that the mere act of observing a subatomic particle changes it. Capturing a photon and then sending it along includes the process of observing it if you're going to try to determine the polarization. As a result, the photon is changed in ways that can be detected by the receiver.

So, any attempt to hack into the information stream is doomed. First, you'd have to guess right on the polarization for every photon, and second, you'd have to observe the characteristics without changing the characteristics of the photon. Both are prevented by the laws of physics.

But just in case someone does guess right, the type of polarization of each photon is determined randomly. This makes guessing correctly unlikely.

So what do Hughes and his group do with this? Currently, they're delivering secure encryption keys of virtually any length. This works because each key is used only one time, it's impossible to crack, and as a result, the information contained in the encrypted transmission is completely safe.

Until recently, quantum key distribution was available only for transmission over fiber-optic cable. Now, however, that's changed. Hughes, working with a group of astronomers, has found a way to adapt quantum key distribution to wireless transmission. Hughes says that he's been able to use it in daylight over long distances. He says that it's possible to use it to send totally secure data between ground stations and satellites, and that he's found a way to send individual photons between the earth and satellites with very little loss.

But suppose someone does find a way to intercept those individual photons? Again, the message is still secure. According to Hughes, the changes in the photons made by the process of observation make the bit error rate of the data stream become very high. As soon as this happens, the key transmission can be abandoned, and a new key transmitted. As a result, any attempt to intercept a secure key transmission will not only fail, but will be detected.

Sounds pretty far-fetched, doesn't it? It's not. A Swiss company, id Quantique (www.idquantique.com), is already selling a fiber-based quantum key distribution device. Hughes says that at least two companies are planning to build wireless quantum key distribution devices. And at least two such networks are already running in the U.S., one near Boston and one near Washington, D.C.

Now, at last, you can be completely confident that your key distribution is secure. Whether the rest of your data transmission is secure depends on more traditional measures, such as making sure the communications facilities themselves are secure, that the people you hire can be trusted, and so on. But you already know how to do that. What's new is that you can be certain no one can get your encryption keys by tapping into your transmissions, and that's now become a certainty. ▮

Wayne Rash is a technology journalist and consultant.

HAILSTORM IS DEAD, LONG LIVE HAILSTORM 2

Ding dong, the witch is dead. When HailStorm was originally released, Microsoft described the initiative as "a set of enabling services that were intended to advance the Microsoft .NET strategy and enable developers to build user-centric XML Web services that offer a new level of personalization for both consumers and business users."

Real-world translation: We want to manage your personal online information (if you're a consumer), or we want you to pay us for sitting between you and your customer (if you're a business) and managing the information flow of that relationship. Now I won't mention who in these hallowed pages predicted that Microsoft would encounter a trust issue with this endeavor, but he wasn't alone: It's fairly obvious that the recent public hearings in the Microsoft anti-trust case have caused some fallout with Redmond's potential partners.

HailStorm—later renamed .NET My Services—was, indeed, an exciting concept. A central transaction database coupled with the .NET technology framework presented all kinds of new possibilities, particularly in that hottest of buzzwords: m-commerce. And while I'm trying to gloat, my original sweat session with this concept actually revolved around Redmond's protecting itself.

Any such data store hosted by Microsoft was going to be the most sought-after target in the Wild Cyber West, and Microsoft's ability to protect itself from such shenanigans simply hasn't been up to snuff. Its liability risk with HailStorm was simply impractical. Soon after that missive, however, Microsoft announced a stringent new internal concentration on security, including several initiatives directly related to .NET. So I shut up, but I still hated the idea and I wasn't alone.

But according to news and analyst sources, what caused Microsoft to stop HailStorm wasn't a lack of trust in Microsoft's security technology as much as it was a lack of trust in Microsoft's ability to play fair with partners. Even behemoth potential HailStormers like American Express and Citibank seem to have taken what we've heard at Redmond's anti-trust hearings to heart. They're worried about what might happen once Microsoft has its tendrils firmly around their customer base. You can't blame them. Swimming with a shark is dangerous business.

The question now for .NET developers, however, is what's going to happen with their newly adopted framework. .NET My Services was publicly described by Bill Gates as the "most important" of all the .NET building block services. Does the halting of HailStorm cripple .NET? Heck, no. Architecturally speaking, .NET is still just as powerful a development environment as it ever was, especially when it comes to Web services. All that's changed is that HailStorm transaction and authentication won't be a ubiquitous part of that arrangement, which is undoubtedly better for both developers and Microsoft in the long run. I stand by the conviction that a full implementation of HailStorm would have backfired hard on both users and sellers, so seeing it retired actually strengthens my optimism for .NET's future.

And remember that while HailStorm is DOA, its poorer cousin Passport is alive and well in Redmond's product strategy. Indeed, Microsoft's just-released Commerce Server 2002 is a perfect example. This whole release is almost entirely about integrating CS2002 more closely with the .NET Framework, Visual Studio .NET and .NET's ancillary services. CS2002 now can integrate directly into the Visual Studio .NET IDE, and to better exploit that capability, it also has received an Application Runtime, Base Class Library and Common Language Runtime Interoperability Layer so you can build CS2002 applications using Active Server Pages .NET and the .NET Framework. And the software also integrates with Passport, ostensibly to provide single sign-on authentication capability. So the option is still there; it's just not based on HailStorm.

The kicker is that caution may not even have been Microsoft's central motivator in canceling HailStorm. Turns out that Redmond and IBM have been working on a new Web services security and authentication scheme called WS-Security for quite some time now. WS-Security is only in the early stages, however, and concentrates right now on message-based security. The present proposal defines only the core requirements needed to protect a message and the mechanisms for tying security characteristics with that message.

But even in its infancy, WS-Security has a bright future. It's based on all the right XML-oriented protocols (SOAP, WSDL, XML Digital Signatures, etc.), so you know future spinoffs will integrate easily with .NET, and what's more, it's got the backing of trusty old Big Blue so partners and customers won't feel like they're paddling alone in a pool with Jaws. HailStorm may be dead, but its progeny is already out of the womb. ▮

Oliver Rist is a freelance technology journalist and vice president of technology at AIC Inc.

SEMICONDUCTOR INDICATOR AT 16-MONTH HIGH

Losses, layoffs and business problems within the technology sector are continuing—and only a few months after pundits began predicting that the global recession is over, and that recovery might be seen in mid-2002. While that still may be the case in some technology-driven market sectors, such as pharmaceuticals or military/aerospace, in many other areas the bad news continues to outweigh the good news. But indications are that the news is getting less bad.

The slow second-quarter recovery (or lack of recovery, depending on your interpretation) is fueled, in part, by the fact that everyone in the value chain has money troubles. That results in delayed or canceled orders, as well as lack of interest in new product lines. Separately, many start-up companies have found it difficult to raise venture funding for operations and R&D, or to cover cash-flow shortages during the recession. Even though interest rates are low, working capital is hard to acquire. That delays the introduction of new, compelling products that might jump-start consumer or enterprise spending.

While the news appears gloomy, and a mid-2002 recovery seems unlikely, there are indeed signs of life, beginning at the very bottom of the food chain: the semiconductor market. For example, Applied Materials Inc., which makes semiconductor wafer fabrication equipment and supplies, is rocking and rolling, with a stock only slightly below its 52-week high.

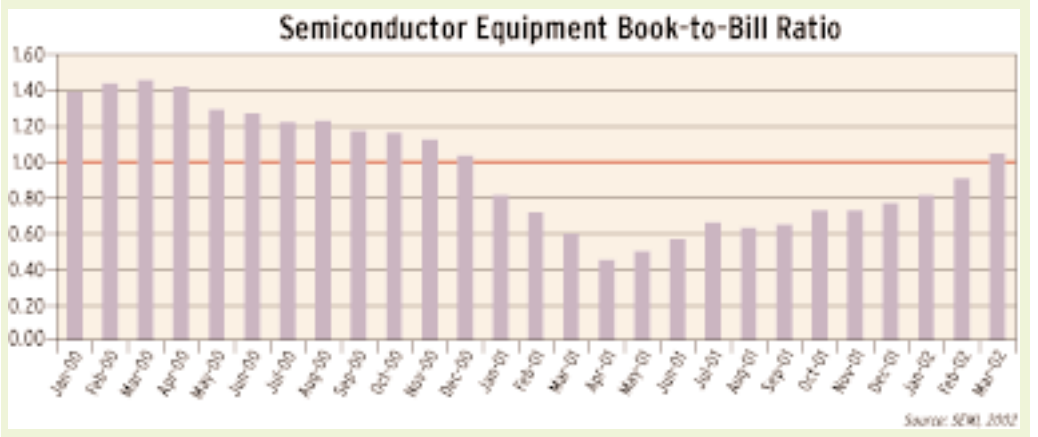
Another indicator is a key market index, Semiconductor Equipment and Materials International's book-to-bill ratio. SEMI is a consortium of semiconductor manufacturers, and its index compares the number of new chip-making equipment orders place (booked) with the number of existing orders filled (billed), as a three-month average. That equipment is used to make chips, which in turn are used to build equipment such as networking and telecom gear, consumer electronics and other embedded systems, and standard IT equipment such as desktop PCs and servers.

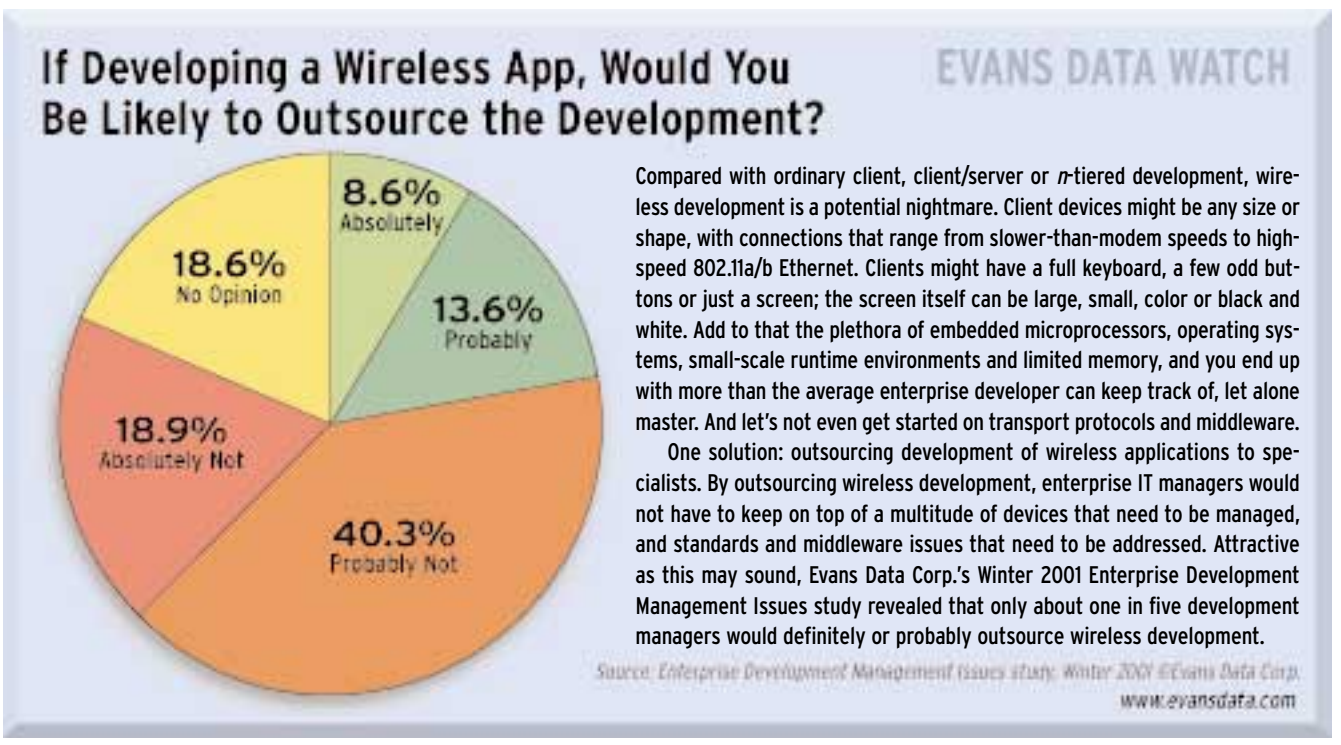
Beginning in January 2001, the book-to-bill ratio fell below 1.0, showing pessimism on behalf of chip manufacturers, and continued declining through April 2001, when the ratio hit 0.44. At that time, at the peak of the recession, only $44 worth of new orders were placed for every $100 of new chip-making equipment delivered.

The following month, May 2001, the index began crawling upward again, and late last month, SEMI reported that for the three months ending in March 2002, the index stood at 1.04. While this remains a far cry from SEMI's healthier days—only two years ago, in March 2000, the book-to-bill ratio was 1.46—the fact that chip makers are buying new equipment implies that they're expecting to receive a lot of new orders from equipment manufacturers. They need to buy a lot more: In March 2002, they ordered $839 million worth of new equipment, compared with $1.2 billion in March 2001.

As chip makers gear up production, they'll fuel new hardware development and server sales to enterprise data centers and ASPs. Enterprises, in turn, will increase their outlays for software, driving sales of tools for both in-house and ISV development. Sure, it's a long path from orders for new chip-making equipment to the world of compilers, J2EE and .NET application servers, application frameworks and IDEs. Still, the drastic improvement in SEMI's book-to-bill ratio is a positive sign that the end of the high-tech recession may finally be in sight, leading perhaps to a recovery of the software development market in the first half of 2003. ■

Alan Zeichick is editor-in-chief of SD Times. David Rubinstein will return next issue.





BUSINESS BRIEFS

Collaborative solutions provider **SiteScape Inc.** has received $5 million in a series B round of funding from lead investor **Echelon Ventures** and **SAIC Venture Capital Corp.** The company also announced a partnership with **SAIC Corp.**, a systems integrator that generated $6 billion in revenues last year, according to SiteScape CEO Tim Butler. The partnership will help SiteScape close on projects it lost last year due to its small size, as well as provide a new customer base to sell into, Butler said . . . **Sybase Inc.** has acquired information component provider **OnePage Inc.** for an undisclosed sum. Sybase plans to incorporate OnePage's portlet technology into the Sybase Enterprise Portal product . . . **Rational Software Inc.** continued to see revenues decline, as it announced it took in $180.1 million for the fourth quarter ended March 31 and $689.8 million for the year, down from the $241.7 million and $814.9 million for the same periods last year. The net loss for the fourth quarter was $11.7 million, or 6 cents per share on a diluted basis, compared with net income of $6.6 million and 3 cents per share for the same period last year. For the year, the company posted a net loss of $75.9 million as compared with net earnings of $72.1 million a year ago . . . **Computer Associates International Inc.** has settled a U.S. Department of Justice lawsuit over its May 1999 acquisition of **Platinum Technology International**, paying $638,000—half of what was sought—to the government but not having to admit any wrongdoing. The government alleged that CA violated antitrust laws by ending pricing discounts for Platinum products before the end of the waiting period mandated by law. Also, the government charged that CA put an employee in Platinum's office to review and approve customer contracts during the waiting period. ■

CALENDAR OF EVENTS

Borland Conference May 18–22
Anaheim, Calif.
BORLAND SOFTWARE CORP.
www.borland.com/conf2002

NextWare Expo May 20–23
Baltimore
PENTON MEDIA INC.
www.nextwareexpo.com/spring2002

Invent 2002 May 28–31
Las Vegas
HEWLETT-PACKARD CO.
www.sys-con.com/email/hpoptin.cfm

Embedded Systems Conference June 3–6
Rosemont, Ill.
CMP MEDIA LLC
www.esconline.com/chicago

XML Web Services One June 4–7
San Jose, Calif.
101 COMMUNICATIONS LLC
www.xmlconference.com/sanjose

VBITS/VSLive June 16–19
New York
FAWCETTE TECHNICAL PUBLICATIONS
www.vbits.net/2002/ny/default.asp

Web Services/JDJ/XML Edge East June 24–27
New York
SYS-CON EVENTS INC.
www.sys-con.com/webservicesedge2002east

Information is subject to change. Send news about upcoming events to events@bzmedia.com.

You could buy our competitor's software development tools, but then you would have to use them.

Now integrates with IBM WebSphere Studio Application Developer

round-trip ER/UML modeling with ER/Studio®

real-time team collaboration

integrated modeling and development environment (IMDE)

Where is it written that a program has to be hard to use just because you want to speed up your software design and collaborative development efforts? The fact is, it doesn't. Embarcadero's Describe™ gives you all the benefits of the UML (Unified Modeling Language) without having to subject your team to some complex, overpriced and totally inflexible application development tool.

That should be a huge relief. After all, your tools should eliminate complexity, not add to it. Describe simplifies analysis, design and application implementation for organizations working with Java, C++ and IDL. With features that include seamless integration with popular IDEs like Sun™ Forte™ for Java™, Borland® JBuilder™ and IBM WebSphere® Studio Application Developer, real-time team collaboration, and round-trip ER/UML modeling, Describe streamlines any design, development or application re-engineering effort without forcing people to change the way they like to work.

Simpler really is better. For more information, or to download a free evaluation copy, visit **www.embarcadero.com** today.

EMBARCADERO TECHNOLOGIES®

© 2002 Embarcadero, the Embarcadero Technologies logos and all other Embarcadero Technologies product or service names are trademarks or registered trademarks of Embarcadero Technologies, Inc. All other trademarks or registered trademarks are property of their respective owners.

QUALCOMM

RULES MAY GOVERN THE WORLD OF TECHNOLOGY BUT IMAGINATION WILL ALWAYS BE KING.

brew
Customize. Personalize. Realize.™

Put your imagination in motion. The revolutionary wireless platform BREW enables developers – even those with no wireless experience – to write applications and get them to market. No finding a handset partner. No gaining access to chip system software. BREW does it all. Download the BREW SDK at http://brew.qualcomm.com/ZSDT1. Wireless carriers need apps. Start thinking.

©2002 QUALCOMM Incorporated. All rights reserved. QUALCOMM is a registered trademark of QUALCOMM Incorporated. BREW and Customize. Personalize. Realize. are trademarks of QUALCOMM Incorporated.

Don't miss the BREW 2002 Developers Conference, June 3–5 in San Diego, CA. Register now: www.brew2002.com